



Chartered
Institute of
Environmental
Health

Water charging:

a submission to the independent Review of
Household Charging and Metering for Water
and Sewerage Services

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The Chartered Institute of Environmental Health

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Summary

This paper is presented as the Chartered Institute's (CIEH's) submission to the independent ("Walker") Review of Household Water Charging and Metering for Water and Sewerage Services ("the Review"), established by the government in August. It is closely based on a report made to the CIEH's Policy Development Board as part of a review of its own policy on water charging in February 2008. It begins with a statement of the CIEH's over-arching drinking water policy and an explanation of why we are interested in issues of charging – a topic not obviously connected to public health. The reason is its relation to "water poverty", a brief history of which, with reference to our previous work on it, is given in section two, together with some illustrations of its effects and, hence, its importance.

Section three puts water poverty into its broader poverty context, showing both how widespread poverty remains, and how water poverty, a sub-set of that, is for the most-part a product of low income and hence likely to remain with us. Absolute and relative poverty are discussed, as are the various groups in society most likely to be poor including those whose situation is exacerbated by unusual needs for water. Brief case studies are offered on the water use and costs of households in varying circumstances and the scale of regional price differences is highlighted.

Prices are, of course, in addition to incomes, the other main component of water poverty and section four looks at the prospects for those in the future, no better in fact than for incomes, emphasising their part in the growth of water poverty and what underlies them before the paper turns to examine the limited help with bills available to consumers in need. Noting the cross-government review of water affordability of a few years ago, it revisits the Vulnerable Groups scheme, heavily criticised in previous work by the CIEH, before looking at social tariffs and the charitable trusts, moving on to draw comparisons with the energy sector where the state takes a markedly more active role in alleviating fuel poverty.

Prices, however, simply reflect the distribution of costs, both decided and affected by the choice of charging regime and section six reviews the various options for these, beginning by suggesting some principles which an ideal scheme would reflect. Varying in inherent cost, complexity and fairness according in particular to their accompanying tariffs, some of the research on tariffs, mainly just modelling in fact, is mentioned before examining how very differently the rest of the UK, i.e. N Ireland and Scotland, approaches charging for water services.

Barely covert for some time, the government's now plain preference for England and Wales is, nonetheless, metering; its solution for water poverty being, in effect to say to most sufferers "buy less" but its intention to use meters not just for charging but to encourage conservation too suggests that prices will have to be raised substantially to choke-off

demand. Without the introduction of perverse subsidies to poorer consumers, however, we suggest even more water poverty will result.

The government's reasoning lies in the pursuit of sustainability but section eight suggests not just that it has misunderstood that concept but that it has also represented the facts behind it so as unjustifiably to emphasise environmental and economic aspects above social ones. The reasons for the growth in demand for water are discussed and the logic of reducing households' needs for water in preference to crudely driving down demand is set out, along with how slow the government and the water companies have been to promote practical conservation methods.

If section eight also reveals shortcomings in national planning policy, section nine suggests that a regulatory obsession with economics must also carry some responsibility for apparent shortages, continuing, for example, to condone leakage on a large scale (even on the companies' unreliable figures) regardless of the alternative social cost (and a statutory duty to contribute to sustainable development). To the extent that the government looks to popular opinion to support its policies, section 10 reveals just how uninformed (and even manipulated) that has been and how, hence, it cannot be relied upon.

The paper's conclusions centre, naturally, on the need for more attention to the social aspects of charging, noting a large and growing population of water poor with every prospect that it will increase in size due to general economic conditions and, not least, rising real water prices in the foreseeable future. Calling for more effort on the parts of government and the regulator to constrain charges, notwithstanding, the paper argues that more help with bills is clearly needed now, regardless of how consumers are charged. If the affordability issue is not settled first, already disadvantaged people will, it is suggested, bear the brunt of conservation policies based on blunt economic tools and more candour is required about the costs of metering, along with a better assessment of its claimed benefits and disbenefits and of its alternatives on which the energy sector provides much useful experience before encouraging the spread of metering any further, let alone compulsorily.

Statistics

This report is heavily illustrated with statistics from a wide variety of official and other sources but it has been impossible to match them; because of the different ways they are compiled and published, some are for calendar years, some for split-years; some are for England, some for the UK; some are more up-to-date than others and so on. Many are based on samples with some inherent error and, inevitably, some are more robustly compiled than others too but as far as possible their sources have been acknowledged and we have been as honest with them as we can be.

1 Introduction

There is, at least, some consensus around the importance of a sufficient supply of water. Water UK has written that "Water is essential to life and vital in maintaining public health ...the continuous supply of water [is] a basic human right." ¹ The government has written "People...must be able to afford the water they need and... should [not] face...hardship because of water bills..." ². The BMA wrote "An adequate supply of clean water is a pre-requisite of public health" ³. Water is unique; without doubt, it plays an essential role unlike anything else in all our lives. Can it – should it - be treated as just another commodity, like so many potatoes for example?

1.1 It is easy to scoff at the idea of a moral aspect to water charging but, not unlike the other bodies quoted above, for much the same reasons it is the CIEH's fundamental belief that every household should be enabled to receive all the wholesome drinking water it reasonably needs⁴. This policy statement, unwittingly when it was first made mirroring a statement in the UN's "Rio Accord"⁵, acknowledges that, traditionally, the focus of interest of public health organisations like ours in the water field has been on quality – on chemical and microbiological standards and to a lesser extent on aesthetic parameters but, overall, on safety. Some relatively rare "incidents" aside, however, we can now take that for granted, in the case of public supplies anyway. And if we should not be complacent about new challenges to water quality, from disinfectant by-products for example, we know at least that they are being monitored and considered, by the WHO as well as by domestic agencies and, in fact, the 1998 European Directive is under review as this is written, even before it has been fully implemented in the UK⁶.

1.2 The emphasis of our policy has therefore shifted over the last decade or so, or in fact, since the privatisation of the industry, ironically returning to the main concern of two or more centuries ago, that is to access issues. Then, however, the problem was due to a lack of infrastructure to support the demands of growing settlements – to transport supplies from untainted rural sources to the cities⁷; now, it is in part related to the cost of supporting that infrastructure itself – the pipes and other equipment and the functions they perform – but also, increasingly, to how those rising costs are distributed against our social backdrop.

1.3 Though water might be described as a common resource, challenging the commercial concept of ownership and, in fact inexhaustible, water services nevertheless have to be paid-for; though the raw material may, quite literally, fall from the sky, treating it, piping it to homes and workplaces, collecting and re-treating it and disposing of the residues costs money, not least because of the amount of expensive energy involved.

¹ From *Debt, charging and social impacts – a Water UK think-tank*, May 2004

² *A better quality of life – a strategy for sustainable development for the UK*, DETR, 1999

³ British Medical Association press release, 16 June 1994

⁴ CIEH Policy Statement 1997

⁵ Chapter 18 of *Agenda 21*, UNCSO, 1992

⁶ Implementation in respect of private supplies and supplies to public buildings is still pending

⁷ See, for example, *Water, the book*, Barty-King H, Quiller Press, 1992

1.4 Consistently high quality standards mean little, however, if consumers cannot afford them and in the UK today, our concerns about this are encapsulated in the word “affordability” – crudely, the size of bills in relation to consumers’ incomes, but inextricably related to the more complicated matters of how costs are allocated between consumers and to their differing needs.

1.5 Despite the policies of the present government, substantial numbers of households remain relatively poor while the real cost of monopoly water services continues to increase. The result, paradoxically, is a virtual right to water alongside increasing unaffordability, evidenced by rising and increasingly widespread debt⁸ but being brought into increasingly sharp relief by the advance of measured charging and that, and the often under-represented social arguments around it, are really at the core of this paper.

1.6 Increasing amounts have been written and said about unaffordability and how to deal with it in recent years; there is now a substantial literature on it, much has appeared in the past months and more is on the way⁹. The government, the regulator (Ofwat) and the main consumer representative (CCWater) all now acknowledge it but to some degree each seems to say “It’s not our problem” (or, at least, “We’re not paying for it”)¹⁰. A problem, it certainly is, however, and just as it was once said “*Water is everybody’s business*”¹¹, we suggest it is everybody’s problem and if this paper does not propose many answers, hopefully it will still make a useful contribution to this latest Review.

⁸ Total debt in 2007/8 increased at twice the rate of increase of bills, exceeding £1bn for the first time and adding on average £11pa to every bill. Long-term (>12m) debt increased by 12.5% over the previous year and the number of households in debt increased too, to ~5m, see *Debt and Affordability*, Water UK, Sept 2008 / RD 19/08, Ofwat

⁹ Both Defra’s *Future Water* and the Parliamentary Water Group’s pre-empting *The Future of the UK Water Sector* touch on it, as did Ofwat’s *Future strategy for customer charges etc* and CCWater’s *Research concerning consumers’ priorities for PR09* and more specifically, its *Charging Research 2007*, published in April. Among work still expected are UKWIR’s much-delayed simulations of charging effects and a piece from the Environment Agency/GLA

¹⁰ See section 5 below

¹¹ Proceedings of the 2nd World Water Forum, the Hague, March 2000

2 Water poverty – what it is and why it matters

It is now a little over six years since the Chartered Institute of Environmental Health (CIEH) and the Centre for Utility Consumer Law (CUCL) collaborated on a paper published by the Public Utilities Access Forum (PUAF) as “Water Poverty in England and Wales”¹². Prompted by the prospect of a review of the Vulnerable Groups Regulations¹³, that collaboration grew from earlier work in the Forum, culminating in the banning of disconnections for debt¹⁴. That arose, in turn, from the coincidence of the Chartered Institute’s concerns to preserve the public health benefits of an adequate supply of water for all and, alongside it, PUAF’s focus on disadvantaged groups’ access to the services of the privatised utilities, both of which continue.

2.1 Drawing on the government’s definition of fuel poverty¹⁵, domestic energy supply being one field of expenditure in which public policy had drawn a line on affordability, that work produced a benchmark¹⁶ of 3% of disposable income. Accepted generally since as a standard, that led in turn to the conclusion that up to four million households in England and Wales could be considered to be spending an excessive proportion of their income on water, overtaken by charges which had risen significantly since privatisation of the public water authorities in 1989¹⁷. Highlighting the regional disparity in prices entrenched by that process, in the case of the poorest households in the most expensive area, that proportion was approximately 13% - nearly 12 times the national average of just over 1% and over four times that which, on the fuel analogy, would define a threshold for “water poverty” (and which, co-incidentally, we found the government itself had chosen as one of its sustainability indicators¹⁸).

Table 1: Water bills as a percentage of social security rates, 2000-01 (%)¹⁹

Annual charge	Jobseeker’s Allowance Single	Jobseeker’s Allowance couple	Pensioners’ income support single
Newcastle (£198)	7	5	5
Plymouth (£346)	13	8	8

¹² Fitch M and Price H, September 2002, at www.puaf.org.uk

¹³ Then, the Water Industry (Charges)(Vulnerable Groups) Regulations 1999

¹⁴ By the Water Industry Act 1999

¹⁵ A relative spend greater than the median of households in the lowest three income deciles

¹⁶ For the distinction between calibration and benchmarking, see *Affordability of Household Water and Sewerage Services in Gt Britain*, Sawkins & Dickie, Fiscal Studies 26 no.2, 2005

¹⁷ Only France among other OECD countries has turned similarly to the private sector to provide its water services and the wholesale privatisation of water services, finance and infrastructure in England and Wales is unique in the world

¹⁸ Though this indicator (Q3) was removed from the national set at its last revision in 2005

¹⁹ The Newcastle and Plymouth figures were the lowest and highest notional water charges for the English cities in a listing prepared by the DTI for household bills in 2000, see *Household Utilities Price Indices, United Kingdom*, DTI, 2001

2.2 This was, of course, the extreme but the situation has changed little since: the average combined bill in the south west, having more than doubled since privatisation, still takes 10.5% of a single person's state pension and the equivalent bill in the Anglian region takes 12% of a contribution-based jobseeker's allowance of £60.50 pw. Nor was this situation entirely unpredicted; in a report written nearly a decade earlier²⁰, the water regulator examined the affordability of water services to low income consumers amidst anxiety about the cost impact of new obligations contained in EC Directives. While overall, during the succeeding decade, average bills were not expected to increase significantly as a percentage of income, pensioners, families with children and single parent families were expected to end up paying more, with single parents and single pensioners receiving Income Support expected to be paying something approaching 6% and over 8% respectively.

2.3 Against a background of growing consumer debt²¹, our paper illustrated how many of the group struggled with other utility bills too, finding considerable overlap between the populations of the water poor and the fuel poor:

Table 2: The distribution of proportionate water and fuel expenditure (% of applicants; % of income) of applicants to the Severn Trent (STTF) and Anglian Water (AWTF) company trust funds (2001).

		STTF	AWTF
Proportion of income spent on water (%)	≤3	45	28
	>3, ≤6	38	49
	>6	17	23
		100	100
	<i>Average Spend</i>	4	5
Proportion of income spent on fuel (%)	≤10	30	33
	>10, ≤20	47	52
	>20	23	15
		100	100
	<i>Average spend</i>	15	14

and referring to earlier work, gave the lie to the allegation that debtors were "won't-payers", setting water poverty in the broader context of low income where it remains.

²⁰ *Paying for Quality*, Ofwat, July 1993

²¹ Outstanding revenue grew by 17% between 1989/9 and 2003/4, RD 32/03, Ofwat

Table 3: The economic circumstances of debtor households²²

Net weekly income	Households with water debt in past year (%)	Net weekly income	Households with water debt in past year (%)
Up to £100	41	£220-£299	11
£100-£159	23	£300-£399	8
£160-£219	13	More than £400	3

2.4 In drawing much-needed attention to the water poor, it also helped in bringing the term “Water Poverty”, first coined by Ruth Lister²³ several years before, into more general use when, at the time, the very concept was still denied by the government.

Why does it matter?

2.5 Water poverty mattered then and it continues to matter today because, of course, it is a cause of social exclusion, an inadequate supply of clean water threatens personal and ultimately public health and it has no place against our concept of environmental health²⁴, let alone in the sixth strongest economy in the world.

2.6 One source of information about this derives from the study of households disconnected from their supplies²⁵ before that practice was ended but the parallel is a good one. It found that just over half the households affected collected water from relatives and/or neighbours. One single parent family apparently survived a four-day disconnection by collecting rainwater and drinking bottled water, demonstrating how deprivation provides an incentive to use unwholesome sources of supply as well as perhaps to over-use that supply. Others reportedly “found” (i.e. stole) supplies of water, transporting it home in jerry cans. All complained, without elaborating, of deteriorating standards of hygiene.

2.7 The response of another consumer offered a “budget payment device”²⁶ illustrates the way a “pay-as-you-go” regime puts water in sharp competition with, arguably more important, bills. He said “. . .if I put a water token in, sometimes, I can't afford to give [the children] food. . .”. Another concurred: “Because I've got two young kids that sometimes needs shoes and things like that take precedence over water really.”

²² From *Water debt and disconnection*, Herbert and Kempson, PSI, 1995

²³ Currently Professor of Social Policy in Loughborough University

²⁴ “A complete state of physical, mental and social health, not merely the absence of disease or infirmity.” per WHO 1947

²⁵ *Water debt and disconnection*, note 22 above

²⁶ The industry euphemism for a pre-payment meter, like disconnection, also outlawed by the Water Industry Act 1999 but now attracting interest again, see CCWater Press release 32/06, October 2006 and *Water Management, vol 1*, Lords' Science and Technology Committee, June 2006, para 8.12

Personal experiences

2.8 More in point, when, following a major refurbishment scheme, water meters first appeared on a social housing estate in Bradford, the children's charity Barnardo's researched their impact²⁷. One single parent with four daughters said: *"I can't afford to let my kids have bath water to themselves so they have to share."*, adding *"I can't let them play with water...it's too expensive to let them use their paddling pool. I'm always going on at them...so they've got out of the habit of washing their hands properly..."* and *"When I rang about my water bill, [the water company] told me it was my fault."*

2.9 A neighbour, another single parent living on Income Support, said: *"I find I'm constantly worrying about it...With gas and electricity you can at least expect lower bills in the summer [but] water is costly all year round and there is a limit to how much you can reduce your usage."* In fact, metering could soon facilitate a higher price for water in the summer months.

2.10 Echoing her, a third neighbour made important points about waste and about monopoly suppliers: *"From the moment I get up, I'm thinking about water – watching money go down the drain...We don't want to be excessive, we just want to use it when we need it [but] the thing is, there's no choice...if your gas bill goes up you can always use some alternative source of heat; you can't change your water supplier."*

2.11 Contemporary work by another charity, Save the Children, found similar effects²⁸. Some of the problems found - arrears, experience of summonses etc - were shared with low income households charged on the basis of rateable value but, the authors of the report said, metering added another dimension; in addition to the pressure on the household budget, there was a pressure to cut back on the use of water. Faced with meters, 70% of the families in their sample behaved economically rationally and cut down. Common measures taken included sharing baths, taking fewer baths and showers, washing clothes less often and not flushing the toilet every time it was used.

2.12 Others found it harder to save water, often citing the needs of their children as the reason why: *"You have to watch everything you use...that's not possible with three kids."* One young mother interviewed said: *"Since I had a new baby, the bill is really going up. The washing machine, the bathing – it's worse the more children you have. I'm dreading the next bill."* Surprisingly in the light of some comparisons being made now, a Somali refugee is reported as saying: *"I am surprised about water...gas and electricity are very reasonable [here] but water is very expensive."* though, in fact, the charges of the companies reflected in the study were below the then national average. Answering the claim that metering was a fair basis for charging, Save the Children concluded that though paying for what you use might seem so, in fact the impact of volumetric bills did not fall

²⁷ *Liquid Gold; the cost of water in the '90s*, Barnardos, 1993

²⁸ *Water tight*, Save the Children, 1993

equally on all social groups; self-evidently, those on low incomes were put under a far greater pressure.

The National Trials

2.13 Nor should any of this have come as a surprise. Beginning in 1989, 60,000 households in 12 areas²⁹ were recruited to the three-year National Water Metering Trials project, funded jointly by Ofwat and the Department of the Environment. Fifty thousand were drawn from one area, the Isle of Wight; the remainder from the other 11. A report on the social impacts of water metering was published in 1992³⁰. While the report notes that the trials areas were generally more affluent than the country as a whole, 59% of households had made attempts to reduce their consumption, 26% reported finding it difficult to do so, many claiming they were economical with water already. Fifty-five percent thought they paid at least as much as under the rateable value-based system, 23% said they worried about their bills when they had not done so before and eight percent reported difficulty paying, most claiming no difficulty before.

2.14 On more detailed examination of this “hardship” group, almost all reported worrying about their bills and about using too much water to the extent that it had created family tension and argument. Despite this effect, that they were as a group “meter aware” (though they found access to their water meters less convenient than to their gas or electricity meters) and that many had made reductions in use to the extent that among them, the number of baths or showers taken fell by 50% and toilets were flushed less often, 57% still found themselves paying the same or more as previously. Approximately a quarter attributed their problems to medical conditions requiring unusual consumption though, on the whole, their bills were no higher than others in the group; the explanation probably lies in how chronic illness tends to depress income.

2.15 We take a closer look at this group in the next section. Some information on another prospective study of prices and their impacts carried out by Ofwat in the early 1990’s is also given there and the most recent (and alarming) prediction is discussed further on, in the section on price trends. A disturbing-enough picture of the intervening years was painted in the report of the cross-government review of affordability in 2004³¹:

²⁹ See Table 10 below

³⁰ *The Social Impact of Water Metering*, WS Atkins, August 1992

³¹ *Cross-Government Review of Water Affordability*, Defra, November 2004

Table 4: Percentage of households spending >3% of disposable income on water services

Average income	2004-5	2005-6	2009-10
Working household with children	1.2	1.5	1.9
Working household without children Non-	3.2	3.8	4.1
working household with children	16.5	19.0	23.0
Non-working household without children	29.9	33.4	36.5
Pensioners	11.6	13.6	16.9
All households	7.9	9.2	10.7
Lowest income quintile	2004-5	2005-6	2009-10
Working household with children	6.3	7.4	9.5
Working household without children Non-	29.5	33.2	37.2
working household with children	20.6	23.3	27.6
Non-working household without children	47.1	51.7	55.0
Pensioners	28.0	32.3	37.5
All households	29.4	32.9	36.9

3 The poverty background

As we wrote previously, water poverty (like fuel poverty) is just a manifestation - a subset - of poverty in general. Since our last publication and until very recently, the national economy has enjoyed sustained success and, to the government's credit, more help has been channelled to many poorer households through pensions and the broader tax and benefits system. Between 1997 and 2004, the government claims, for example, that families with children and pensioner households were both, on average, £1,350 a year better off³². Notwithstanding, though our society continues to grow richer on average, some stark inequalities remain and there remains a sizeable population of poorer and other consumers at disadvantage, predominantly through low income and, deliberately laboured, the purpose of this section is to highlight that and their situation.

Some individuals' misfortune may be transient (though no less profound for that) but in the case of a number of groups it is deeply embedded. These poor people are almost inevitably water poor people too and their difficulty paying water bills should no more be seen just as a water issue than it can be solved by fiddling about with charging mechanisms. Indirectly, this section also casts doubt on official estimates of the size of vulnerable groups.

Numbers in poverty

3.1 There continue to be debates about where the "poverty line" should be set but both government figures and those most frequently used by poverty researchers and practitioners tend to set the line at 60% of the median income for similar households. While, in 2006/7, the top 10% of male earners took home more than a quarter of a total national wage bill³³ up by 1.1% in real terms over the year before, at the same time official figures suggest some 13.1 million people were living in households which had a weekly income of 60% or less of the relevant median household income after housing costs³⁴. For a single person household that meant no more than £151 per week; for a couple with no children or a lone parent with one child, it meant no more than £226 per week and for a couple with two children, £346 per week. The aptly-described basic state pension, now³⁵ £90.70 per week for a single person (£4,716.40 pa) and £145.05 for a couple, was last year only about two-thirds of what a study by researchers at the London School of Hygiene and Tropical Medicine calculated was the minimum necessary for a healthy lifestyle for people aged 65 or over, living independently and without serious disability³⁶.

3.2 Income poverty is not evenly distributed across society and of those living in households on less than 60% of median household income after housing costs:

³² *Cross-Government Review of Water Affordability*, Defra, November 2004

³³ *Annual survey of hours and earnings 2006/07*, ONS, 2007

³⁴ *Households Below Average Income' (HBAI) figures*, DWP, latest – see www.dwp.gov.uk/asd/hbai/hbai2007/chapters.asp

³⁵ Most recently up-dated in April 2008

³⁶ *International Journal of Epidemiology*, July 2007

- 10% are pensioner couples
- 7% are single pensioners
- 34% are couples with children
- 20% are single males or females with children
- 10% are working age couples without children
- 12% are single males without children
- 7% are single females without children

3.3 Put another way, the risk of living in households below 60% of median income is shown in the following table:

Table 5: The risk of living in households below 60% of median income (AHC)(2006/7)

Category	Percentage Risk	Number (millions)
Pensioner couple	17	1.28
Single male pensioner	18	0.22
Single female pensioner	23	0.76
Couple with children	22	4.49
Single with children	51	2.6
Working age couple no children	12	1.39
Single male working age no children	25	1.6
Single female working age no children	23	0.94
All children	30	3.84
All individuals	22	13.1

and on the basis of these figures a total of at least 10.7 million people were at or below the “poverty line” before housing costs in England and Wales in the middle of last year.

3.4 Worth noting too is how those on low incomes are concentrated in other ways; for example, over 50% of all social housing tenants have no earned income. Average incomes in the private rented sector too are below those of owner-occupiers and over 50% of water debt currently arises from that sector despite that it makes up little more than 13% of the total stock. Not surprisingly, Water UK says that 46% of debtors are in the highest 10% credit risk category³⁷.

Poverty in context

3.5 Income statistics only provide part of the picture, however. Almost every wage-

³⁷ *Debt and Affordability*, Water UK, September 2008

earner has taxes and other employment-related expenses to meet, and even the unemployed have food, clothing, housing costs etc. Few households are exactly alike and many – often unavoidably – have higher essential spending than others and the concept of “Relative Poverty”, developed and refined since the late 1970s, has proved to be a particularly powerful way of investigating and describing dimensions of poverty other than in simple income terms. Consequently, it is now widely accepted that societal expectations and norms about what is essential spending for a “decent” standard of living are of enormous importance in defining social and economic inclusion and equality. The main reason for drawing attention to this here is that the most commonly-used benchmark of water poverty is when water and sewerage charges amount to three percent or more of a household’s “disposable” income.

3.6 Using this approach, work for the Joseph Rowntree Foundation has confirmed that while the proportion of households in poverty based on income fell from 25% to 22% between 1996/97 and 2002/03, an alternative measure taking into account expenditure found the proportion to have risen from 20% to 22% over the same time period.³⁸

3.7 According to one more recent study³⁹, rising costs swelled the average family’s annual food bill by 16% - up to £750 - between October 2006 and September 2007. A little before, accountants Ernst & Young showed that rises in the costs of essential household goods including water, heating, petrol and local taxes meant discretionary budgets of typical families⁴⁰ in the UK were then, at 22% of gross income, down by a sixth in four years⁴¹ while another survey, for uSwitch, put UK disposable incomes at a ten-year low with those of households in 73% of towns and cities even lower than the national average of c.£16,300⁴² and highlighting water costs, up by 33% since 1997, as a major contributor. All of these indicators are likely to have headed further towards the red since, pushed, despite some slackening of fuel prices and a reversal of the trend in interest rates by unemployment now heading towards two million and economic contraction. In September last year, Citizens Advice reported that debt was then the number one issue advised on in bureaux, accounting for 1.7 million enquiries in 2006/7, due in part to sharp increases in the cost of utilities⁴³. The CIEH itself warned⁴⁴ last January of the direct effects of rises in energy prices; an indirect effect, of course, lies in the pressure they put on other household expenditure.

3.8 Persistent low household income can be especially damaging. Debts and related financial difficulties are usually more pronounced among individuals and households with

³⁸ Brewer M, Goodman A, Leicester A, *Household spending in Britain: What can it teach us about poverty?*, Joseph Rowntree Foundation, in association with The Policy Press, 2006

³⁹ By mySupermarket.com, reported in the Daily Telegraph 24 October 2007

⁴⁰ NB “typical” (couple, two children <19y with average 25y repayment mortgage at standard variable rate and gross monthly income of £3,790), not average

⁴¹ Reported in the Times 22 June 2007

⁴² Report for uSwitch.com by Research Insight, reported in the Times 8 October 2007

⁴³ Citizens Advice Press release, 11 September 2007

⁴⁴ *Fuel prices threaten health*, Environmental Health News, 18 January 2008

persistent low incomes (defined as having a low income for at least three out of the last four years), for instance because savings are used up in order to help pay for everyday items and services. Altogether, some 11% of individuals (and over half of those identified in the JRF study [para 3.6] above) in poverty have persistent low incomes after housing costs. Seventeen percent of all children live in such households, as do 13% of pensioners, and 8% of those of working age and these observations beg some further examination of those groups which are at particular risk of living in low income households.

Children

3.9 The most obvious place to start is with the high-profile subject of child poverty, or rather of children living in poor households. Children represent approximately one quarter of the UK population and figures from the Office for National Statistics indicate that there are c.968,000 households containing three or more children under 19. About 42% of children living in poverty are from families with three or more children⁴⁵ but these account for only 23% of all families⁴⁶ – showing a clear correlation between the number of children in families and the prevalence of family poverty. Seventy-eight percent of families with four or more children are in the bottom 40% income bracket compared with 42% of families with just one child.

3.10 Nationally, 30% of all children live below the poverty line; in inner London the rate is almost 50%. Throughout the UK, over one in 10 children – c.1.3 million - are in severe poverty according to recent research for Save the Children,⁴⁷ the highest rate again being found in London. Classifying children as being in severe poverty if they were in households with an income below 50% of median in combination with severe material deprivation, for a couple with a child the research suggested that meant living on an income of c.£7,000 per year, or just c.£19 per day to cover utility bills, food, clothing, transport etc. Though eradicating child poverty within 20 years was one of Labour's pledges in 1997, the UK's child poverty rate for large families remains among the highest in the OECD and the UK tax and benefit system still favours small rather than large families⁴⁸.

People with disabilities

3.11 There are about 770,000 disabled children aged under 16 and the number with complex needs in particular is rising⁴⁹. It has been estimated that 55% of families with disabled children live at the margins of poverty, more than four times the percentage of all households⁵⁰. According to the same study, the cost of raising a disabled child is three times that of bringing up a non-disabled child and 84% of families bringing up a disabled

⁴⁵ *Childcare Facts*, Daycare Trust, see

www.daycaretrust.org.uk/mod.php?mod=userpage&menu=2601&page_id=8

⁴⁶ *Social Trends*, ONS, 2006

⁴⁷ *Severe Child Poverty in the UK*, Magadi M and Middleton S, Save the Children, 2007

⁴⁸ *Child poverty in large families*, Bradshaw et al, JRF, 2006

⁴⁹ *Improving the life chances of disabled people*, Prime Minister's Strategy Unit, 2005

⁵⁰ *Ordinary Lives*, New Philanthropy Capital, 2005

child are in debt, compared with only 47% of households in general. Among the additional costs faced by parents looking after a disabled youngster are trips to hospital, heating, clothing, bedding, equipment, housing adaptations and laundry.

3.12 Some 2.6 million people were in receipt of incapacity benefits in the UK in July 2008 and households containing disabled adults are also generally more likely to be income poor and to have to spend “extra” as a result of the disability or condition. Official figures collated by *The Poverty website*⁵¹ show that disabled adults aged from 25 to retirement age are twice as likely to live in low income households as their non-disabled adult counterparts: 30% compared with 15%. The gap has grown over the last decade, and the rate for disabled adults is now higher than it was in the mid-1990s, whereas the rate for non-disabled adults is lower. Disabled adults who do work are on average paid 10% less than non disabled adults and, overall, just under half of all households containing one or more disabled people fall into the bottom two quintiles of income distribution, compared with 30% of all other households.

3.13 Not only are disabled people more likely to exist on a low income but the extra costs associated with disability can be considerable. Research supported by the Joseph Rowntree Foundation concluded that, amongst other things, those reliant on benefit payments needed on average £200 a week more in order to meet those costs and to achieve an acceptable and equitable quality of life.⁵²

Carers

3.14 At any one time, something in excess of 6.5 million people have significant care-giving responsibilities for disabled relatives or friends and those with long term health problems and every day, over 6,000 people take on a caring responsibility, often with little or no time in which to plan.⁵³ Seventy-seven percent of carers report a significant drop in their financial state after becoming a carer, at the same time 87% have said that they incurred extra costs through providing support. In surveys, one in three carers reported difficulties in being able to pay energy or other utility bills and the same proportion have been in debt since becoming a carer.

Older people

3.15 Five point nine million pensioners have incomes which put them in the lowest 40% income bracket with the standard single person’s state pension this year set at just under one-fifth of current mean average earnings of £463pw. Age Concern estimates that, because of the prevalence of low incomes, 22% of those over 70 suffer from fuel poverty (where more than 10% of people’s income before housing costs is spent on heat and

⁵¹ www.poverty.org.uk

⁵² Smith N, Middleton S, Ashton-Brooks K, Cox L, and Dobson B with Reith L, *Disabled people’s costs of living: More than you would think*, Joseph Rowntree Foundation, 2004

⁵³ www.carers.org.uk

lighting), compared with an average of just over 6% among the population as a whole and, according to British Gas, one in five (c.2.5 million) elderly people in the UK retreat to one room in the winter to save on heating costs. Sixty percent of those aged 65 to 74 report having a long standing illness, rising to 64% of those aged over 75. The projected increase in the elderly population in the future is highlighted in section 8 below.

“Above-average” essential use

3.16 If, thus, we need to be aware of the complexity of households’ circumstances and needs in determining who is or is not likely to be struggling financially, continuing our theme of examining poverty in terms not simply of income but also of necessary expenditure there is, of course, another group in the population particularly deserving of our attention. That is those people, regardless of which other population group they may fall into, who have a need for unusual amounts of water.

3.17 Domestic water consumption is commonly broken down by uses and though estimates can vary depending on their source, the following figures appear to be about mid-range for the average household:

- 9 litres per toilet flush;
- 80 litres per bath;
- 35 litres per shower;
- 70 litres per power shower;
- 10 litres per hand wash/teeth clean (15 if tap is running);
- 10 litres per person for cooking and drinks;
- 6 litres washing dishes by hand or 35 litres if using dishwasher;
- 80 litres per washing machine load;

3.18 People, young or old, with disabilities or other long term conditions do not necessarily require above-average amounts of water but there is a surprisingly large number of conditions in which higher than normal use of water is either required or leads to beneficial effects on sufferers’ health and well-being.

Arthritic conditions

3.19 In simple prevalence terms, arthritis is amongst the most common conditions which might necessitate relative high consumption. It is the single biggest cause of disability in the UK and something like nine million people suffer from it, including 150,000 children⁵⁴. About 40% of over-60s suffer from osteoarthritis; the less common rheumatoid arthritis affects only 0.8% of the adult population. Most medical advice highlights the pain-reducing and beneficial effects of having one or more hot baths a day, and those with rheumatoid arthritis in particular are often advised to exercise their hands in hot soapy water first thing

⁵⁴ From Arthritis Care

in the morning and throughout the day. Use of anti-inflammatory lotions and ointments is often recommended, which can lead to an increased need to wash clothes, towels, etc.

3.20 A bath a day, instead of a shower, would increase a person's consumption from 245 litres a week to 560, exercising hands in hot water four or five times a day for instance would increase weekly consumption by up to 300 litres, a 50% increase in clothes/towel/bedding washing could easily add an extra 160 litres per week. In short, essential use could be increased by 700-800 litres a week, or 100-plus litres a day.

Incontinence

3.21 At least six million people have bladder or bowel problems at any one time, including 500,000 children over the age of five; up to one in three of us will experience this problem sometime in our lives.⁵⁵ It is far from being confined to frail older people, though prevalence rates are higher among elders. There have been no firm estimates about the extra washing of clothes, bedding and re-usable pads required, but additional washing machine use would seem an inevitable consequence and, for example, someone requiring daily use might consume 560 or so litres a week more, or 80 extra litres a day.

3.22 Similarly, relatively high water consumption is important for the health and well-being of people with other conditions. For example, diarrhoea is one of the main symptoms of Inflammatory Bowel Disease (IBD), including Crohn's Disease and Colitis, where frequency of evacuation ranges commonly from twice to 30 times in 24 hours. Sufferers may also exhibit a degree of incontinence.⁵⁶ Clearly, toilet flushing will increase considerably and there might well be a need to increase the amount of clothes washing. In addition, in order to stay healthy, people need to drink a lot more water (including some who have had to have part of their lower gut - where much water is re-absorbed - removed). Some 150,000 people have IBD. Though there is an insufficient evidence base on which to estimate additional water consumption, to consider extra toilet flushing alone, an extra 15 flushings a day could amount to 135 litres more each day.

3.23 Irritable Bowel Syndrome (IBS), which can have similar symptoms to IBD, affects about a third of the population; about one in 10 people suffer symptoms severe enough seek help from their doctor. Although, in general, it is often regarded as less "serious" than IBD, the condition – especially if it is pronounced and severe – can lead to additional water consumption on a comparable scale, similar conditions affecting the bladder likewise.

Skin conditions

3.24 Skin conditions or disorders, including acne, dermatitis, eczema, urticaria, Crohn skin

⁵⁵ From The Continence Foundation.

⁵⁶ From the National Association for Colitis and Crohn's Disease

disease (which may accompany the inflammatory bowel condition), psoriasis, and many others, are estimated to affect some 4.5 million people.⁵⁷ Some can be triggered or exacerbated by detergents, perfumes and perfumed products and soap, for example, so clothes, towels and bedding need extra rinsing with water. Some common conditions, like atopic eczema, appear to be associated with the droppings of the house mite, so here too more than “normal” washing or shampooing (of carpets, curtains, etc.) is often recommended. Higher than average consumption may also result from the use of wet wrap bandaging to soothe dry itchy skin. For many conditions emollient ointments and lotions are recommended, which is likely to lead to an increased need to wash clothes, bedding, etc., and frequent baths using emollient oils may also be needed in order to keep the skin hydrated and reduce discomfort and the threat of infection.

3.25 While, then, some individuals and households consume more water than others, it is important to recognise that many have no real alternative if they are to maintain their health and well-being.

Benefits recipients

3.26 The final group we look at explicitly are households on benefits. Though we might have looked at them along with other facets of “income poverty” above, we have left them until last because we need to describe their situations differently.

3.27 The HBAI statistics⁵⁸ show that benefits and/or tax credits provide, on average, 53% of the income before housing costs⁵⁹ of households in the bottom income quintile (an only marginally smaller group than the 22% deemed [para 3.6] to be in relative poverty). It might, therefore, seem reasonable to examine the extent to which households or individuals on particular benefits find paying their water bills easy or hard, however, the benefits and tax credits system has now become so complex that it is no longer helpful simply to set some benefits levels against water charges. Instead, we have used a range of illustrative examples of households in particular circumstances.

Illustrative examples

3.28 The assumed bill figures used in the following examples are based on the bills for 2008/9 calculated according to the companies' standard tariffs and the assumptions laid out in Ofwat's *Water and sewerage bills 2008-09*, ie

“People who have a meter pay for their water and sewerage services based on the amount of water they use. We have set out some examples for people who have a meter and use:

⁵⁷ The National Eczema Society

⁵⁸ *Households Below Average Income*, 2006-07 survey and reports, DWP see www.dwp.gov.uk/asd/hbai/hbai2007/chapters.asp

⁵⁹ 48% after housing costs.

- *60 cubic metres (m³) of water a year (equal to an average single person using about 165 litres of water a day);*
- *160m³ of water a year (equal to an average family of three using about 150 litres of water each a day); and*
- *270m³ of water a year (equal to an average family of five using about 150 litres of water each a day)."*

3.29 The illustrations give an indication of how much water may be consumed by some different types and sizes of households, with estimates of their income and expenditure on water services based on a mid-range (in price terms) company, Southern Water, and the most expensive, namely South West Water.

3.30 On the basis of the above consumption figures presented by Ofwat, the expected bills for customers of Southern Water are:

For the single person, around £223 per annum, or £4.29 per week

For the family of three, £473 pa, or £9.10 per week

For the family of five, £747 pa, or £14.37 per week

and for the 1.6 million consumers in the South West, the expected bills are:

165 litres per person per day (single person) = £304 or £5.85 per week

150 litres per person per day (family of three) = £740 or £14.23 per week

150 litres per person per day (family of five) = £1,220 or £23.46 per week

Illustration 1: Disabled person and carer

Mr and Mrs A are a couple in their fifties; he has quite severe arthritis and is unable to work, while his partner has had to become a full-time carer. Their joint weekly income consists of "his" long term Incapacity Benefit (pending his transfer to the new Employment and Support Allowance), of £84.50 plus Disability Allowance (middle rate care component) of £44.85, plus her Carer's Allowance of £50.55 and her Income Support of £60.50, plus £27.75 carer premium. They receive in benefits a total of £268.15 a week – note that this level of income places the couple a little above the "poverty line", defined as 60% of median household income (which was £226 pw BHC for a couple with no dependent children in 2006/7).

They are metered and, living in an area covered by Southern Water (which has mid-range charges), might expect an annual bill of some £348 (£6.69pw), which is a simple average of single person and a family of three bill figures, which equate roughly to 157 litres per person per day, and 314 for the household. But he usually needs to have a hot bath every day, occasionally two if the pain is particularly bad, and the anti-inflammatory ointments which have to be applied every day means that the washing machine is used on average three times a week rather than twice. Consequently they generally use an extra 500 litres of water a week, or 71 litres a day, which means that their annual bill is 23% higher than that assumed above, or £7.91 a week, so their water bill amounts to 2.95% of

their weekly income before net housing costs (and obviously, the extra baths and use of the washing machine also affect their fuel bills).

If they lived in the South West, they could expect an annual bill of about £522, or £10.04 per week, but when the added consumption is included, the bill would be some £12.16 per week – 4.5% of their weekly income. They would appear to be eligible under the Vulnerable Groups Regulations, discussed in more detail later, which would reduce their expenditure to the average metered bill for the region, currently £497, a saving of £2.62 per week.

If they were not metered, their water bill as a percentage of their income would be 1.7% if they lived in the area covered by Southern Water, or 3.9% if they were in the South West (assuming they live in a house with an RV of £100). Typical bills increased by £43 (both unmeasured and measured) in the Southern area; £99 (unmeasured) and £37 (measured) in the South West area last April, the big difference here presumably the result of tariff rebalancing.

Illustration 2: Single parent with 2 children

A lone parent with two children aged under 10 could easily expect: 14 flushes per day (including holidays); five baths a week for each child plus two for the parent; five showers a week for the parent; four handwashings or teeth-cleaning sessions per person per day; use of about 30 litres a day associated with cooking; the dishwasher used once a day, possibly also the washing machine, and a reasonably modest amount of watering of plants in their (small) garden – for example, averaging about 150 litres a week. This would total about 574 litres, or around 191 litres a day per resident. Ofwat's estimate for a family of three is 150 litres per person per day, around £473 (£9.10pw) for Southern Water, and £740 (£14.23pw) for South West Water, but when the additional 27% consumption is taken into account the bill for Southern would be around £11.17 per week, and around £17.85 per week for South West Water. These amounts are only illustrative, but they do show that higher-than-average levels of consumption do not necessarily arise out of "unreasonable" or obviously-wasteful behaviours or habits.

This fictitious lone parent might not at present be working and if so, she would probably be receiving Child Benefit of £31.35 a week, Income Support of £60.50, and Child Tax Credit of £90.67 – a total of £182.52 per week (source: DWP and HMRC).

With the above assumed amount of consumption of water, the proportion of her income that metered water bills would represent, before housing costs, would be 6.1% if she lived in the Southern area, and 9.8% in the South West area. She would not be eligible under the Vulnerable Groups Regulations. If she lived in a similar house to the couple above, on unmeasured charging it would be 2.5% in the Southern area and about 5.7% in the South West area.

Illustration 3: Single person on minimum wage

A single person in their early twenties, working 37 hours a week at a job which pays the same as the

National Minimum Wage, namely £5.73 an hour, or £212.01 a week. Their income is £174.16 a week after tax and national insurance.

As this person is out at work full-time, their consumption might be somewhat lower than the average of 165 or so litres per person per day. We will assume that the individual has a normal shower every day, uses the basin for washing three-four times a day, uses perhaps five litres a day for cooking and drinks, uses half the average amount for washing dishes, uses the washing machine twice a week on average, and flushes the toilet about four times a day on average (including weekends, obviously). It is assumed that there is no garden watering. This amounts to, say, 137 litres, per day. This is nearly 17% below what Ofwat has assumed for a single person household.

If the individual was on a meter and lived in the Southern region, the cost of their water consumption would be about £3.80 per week, representing c.2.2% of their income before housing costs, and 2.9% if they lived in the South West area. Obviously, this would be more if the adult was not out at work all day.

On unmeasured charging it would be around 2.6% in Southern and about 6% in the South West area (again, based on modest accommodation with a rateable value of £100).

Illustration 4: Older couple with health problems

A household containing two people in their mid-seventies, the husband has substantial continence problems, the wife has a significant amount of arthritis. Their income consists of the basic state pension of £145.05 per week (married couple based on husband's contributions), the husband receives the higher rate of Attendance Allowance, of £67 a week, so their gross weekly income is £212.05. They live in a modest terraced house with an RV of 100 which they own outright, and have £5000 in a savings account "for a rainy day". They qualify for full Council Tax Benefit.

They are careful about their spending in general, and are mindful of their consumption of water. The toilet is flushed about twenty times every 24 hours, primarily because of the husband's continence problem and, because of his condition, they have to use the washing machine every day. Sometimes he is unable to reach the toilet in time, and so their usual routine of having four or five showers each a week is often increased to a total of fifteen showers a week. The wife tries her best not to have the hot baths that her GP recommends in order to ease her pain and stiffness, but sometimes it's absolutely necessary and, over the course of a year, she averages three baths a week. In addition they use their dishwasher every other day, on alternate days the dishes are hand-washed; each uses the basin for hand-washing or teeth-cleaning four times a day usually, and they use the garden hose once a day only in the hottest of periods, say for four weeks a year in all.

On this basis they use c. 475 litres a day on average, 51% more than a so-called average two-person household. The cost of this in Southern Water is £487.83 (£9.38 per week), and £766.56 (£14.74 per week) in the South West. For Southern, the bill would account for 4.4% of their £212 pw income and in the South West it would amount to almost 7%. Their unmeasured charge amounts to 2.2% in Southern, and just over 4.1% in the South West.

Illustration 5: Better off couple without children

Consider a reasonably well-off professional couple with no dependent children who, in 2008, each earn £636.30 per week (median earnings for all “professionals”, see *Annual Survey of Hours and Earnings 2008* / ONS) or £66,175 pa combined - about £950 net per week.

If they each consumed the simple average (metered) amount, namely c.157 litres a day, their weekly bill if they lived in the Southern area would amount to just 0.7% of their income. If they lived in the South West water costs would be 1.1% of net income.

3.31 The regressive nature of water charging, which would seem to be particularly evident in metered households, is exemplified by the example of the household *not* on benefits (Illustration 5) and in the following table:

Table 6: The regressive nature of water charging (illustrative)

Illustration (ranked L-R by income/person)	2: single parent with two children	4: older couple with health problems	1: disabled person with carer	3: single person on minimum wage	5: better- off couple
Weekly income / person	£61	£106	£134	£174	£475
Southern measured (unmeasured)	6.1% (2.5%)	4.4% (2.2%)	3% (1.7%)	2.2% (2.6%)	0.7% -
South West measured (unmeasured)	9.8% (5.7%)	7% (4.1%)	4.5% (3.9%)	2.9% (6%)	1.1% -

3.32 What these case studies illustrate is that people with either above average needs for water use or below average incomes can find themselves in a position where a high percentage of their income is devoted to paying for what is primarily an essential service. People with a combination of these circumstances are in the worst position and all are likely to be better off with unmeasured charging, rather than meters. For those with low incomes and below average water usage, or average or above average incomes with average water consumption, the burden of water charges is much less and in this sense both charging systems are regressive.

3.33 Note, however, that these illustrations are based on net income, not disposable income and while there is no agreed definition of that or of the expenses which need to be taken account of to arrive at it, the Family Budget Unit has developed the concept of a ‘low

cost but acceptable' budget (LCA).⁶⁰ The Unit's LCA for a couple, one a full-time earner and one part-time, living in social housing with two children aged 10 and four is as follows (2006 prices):

Food - £67pw;
Clothing, personal care, household goods and services - £48.29
Leisure goods and services - £27.24;
Net housing costs - £60.64 (plus £17.44 Council Tax);
Fuel - £17.28; non-car transport - £8.82;
Job-related and childcare costs - £72.54.

The total, with minor incidentals, is £327 per week, or £17,000 a year (if the household has a car this rises to £353pw)⁶¹.

3.34 If it is reasonable to assume that this household's water consumption is roughly the same as that for the lone parent with children (Illustration 2) above, namely 191 litres per person per day, for them the metered cost of water in the Southern area would have been £11.17 per week, and £17.85pw in the South West⁶². This amounted to 3.4% of the 2006-07 household budget in the Southern area, and 5.5% in the South West.

3.35 On the same basis, a single person working fulltime and a local authority/RSL tenant had a low cost but adequate budget of £157 per week (£177 with a car). Again using the above example of a single person whose consumption was estimated to be 137 litres per day on average, there would have been metered charges of £3.80 per week in the Southern area and £4.99pw in the South West. These charges represented 2.4% of their weekly budget in the Southern area and 3.2% in the South West.

3.36 And for the household depicted in Illustration 4 - the Family Budget Unit estimated that an average LCA for a retired couple was just over £218 per week, including £17 a week for Council Tax and £57 a week for rent. Deducting those and given their consumption, their bill if they lived in the Southern area would have amounted to 6.5% of their weekly budget and 10.2% if they lived in the South West area. Note though that the LCA makes no allowance for owner occupiers' responsibility for all repairs, re-painting, insurance and other building-related costs, so it could be argued that these proportions should be higher.

⁶⁰ Family Budget Unit, University of York, see <http://www.york.ac.uk/res/fbu>

⁶¹ www.york.ac.uk/res/fbu/documents/LCAbudgetsforfamilieswithchildrenandasinglemanApril2006.pdf

⁶² See http://www.ofwat.gov.uk/regulating/reporting/rpt_tar2006-07.pdf, tables 16 and 18

Table 7: Percentage of LCA taken by illustrative consumption

Illustration (ranked L-R by LCA)	Older couple with health problems	Single person on minimum wage	Couple with two children
LCA / week	£144	£157	£327
Southern	6.5%	2.4%	3.4%
South West	10.2%	3.2%	5.5%

Regional issues

3.37 As these illustrations suggest, the whole issue is, moreover, exacerbated by geography, in particular if consumers live in the South West; for many people the “postcode lottery” is as important in terms of their bills and ability to pay as the method of charging. The average gross weekly household income (2004/5) for the UK as a whole was £574pw but 27% of households had an income of £250pw or less; the proportion of these in each region is given below and indicates where general poverty might be more or less prevalent.

Table 8: Average gross weekly household income and proportion of households with incomes < £250 pw by region with predominant supplier (2004/5)

Region	Income	Households with income <£250 pw	Predominant supplier
London	£743	26%	Thames
South East	£661	23%	Southern
East	£625	24%	Anglian
East midlands	£552	26%	Anglian
South West	£543	27%	Wessex & South West
North West	£527	29%	United Utilities
West midlands	£525	30%	Severn Trent
Yorkshire & Humber	£511	31%	Yorkshire
North East	£454	38%	Northumbrian

And in the following illustration, average household income in the various regions is set against the then average charges of the most likely water and sewerage supplier. The figures are taken from *Regional Trends 39*, ONS, 2006.

Table 9: Proportions of average gross weekly household income represented by average bills (2004/5)

Region	Unmetered %	Metered %
London	0.73	0.66
South East	1.02	0.85
East	1.28	0.92
East Midlands	1.45	1.04
South West (only South West Water prices used)	2.30	1.34
North West	1.24	1.16
West Midlands	1.04	1.00
Yorkshire & Humber	1.20	1.00
North East	1.24	1.05

3.38 So the difference between the lowest and the highest proportion of average household income represented by average household bills was a little over threefold for unmetered households (0.73 – 2.30) but still twice as much for metered households (0.66 – 1.34). If this, somewhat rough and ready, illustration should be construed as suggesting that the risk of being in water poverty is less pronounced region-by-region for households which are metered it needs to be remembered that they are not, of course, comparable populations, meter optants tending to reflect higher RV dwellings and higher incomes, and there seems no *a priori* reason why metering should reduce regional inequalities; the illustration is included because it helps to point to the importance of what is often termed, the “post code lottery” in discussions about water poverty.

3.39 On inequality, though, Ofwat has done some analysis of whether there are links between companies’ debt levels and income deprivation in that area, with the hypothesis that the more income-deprived the area is, the higher the debt levels would be. Though this analysis found no statistically significant relationship at company level, some correlation was, however, found at more local, sub-company, levels⁶³.

⁶³ See RD 16/06 Annex A, p 9: available at: <http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/Content/rd1606>

Water charging: a submission to the independent Review of Household Water Charging and Metering for Water and Sewerage Services

4 Prospects for prices

At the same time, as we have seen, as there is increasing pressure on the available finances of the poorest households, the prospects for water prices are not good. Whereas the price review of 1999 initially brought a reversal of water price increases, a reduction in the proportion of rising incomes spent on water and a decline in the numbers in water poverty⁶⁴, the government admits that the 2004 price review (PRO4 in the new nomenclature) reversed that trend and put prices on an upward trajectory again. This seems set to continue for the foreseeable future, pushed by a variety of factors, such as the cost of implementing the Water Framework Directive⁶⁵, the transfer of responsibility for private sewers to the water and sewerage companies⁶⁶ and, not least in point, by the costs associated with water meters which we come to later.

Price trends

4.1 Price limits were first set by the Government for 1989/90 when the industry was privatised and in the first years averaged over 5% a year above inflation. Successive periodic reviews by Ofwat resulted in lower increases in 1995 to 2000, followed by reductions in 2000 when the combined bill went down to an industry average of £265. It then increased to £274 in 2004, rising to £312 last year and to £330 in this⁶⁷. This represents an increase of around 51% before inflation over 1989/90 when the average combined bill was £219.

4.2 Domestic consumers in England and Wales are now in the late stage of another period of above-inflation rises in average water and sewerage bills which began in 2005/6. The price rises emanate from Ofwat's last periodic review of price limits and its final determinations for the five years to 2009/10 meant annual average price increases of 4.3% for the water and sewerage companies before inflation, however, the price trajectory was much steeper in the first year and based on a price limit of 9.4%. The price limits for the water-only companies were 4.2% on average per year over the period 2005 to 2010 but these also included a higher increase in the first year of 9.6%. In addition, in the past year more than one of the companies⁶⁸ has asked for a review of their price limits prior to PR09, citing the problems of increased costs, including rising debt levels and the number of household customers opting to switch to metered charges⁶⁹ (so-called "notified items"), the latter arising because, perversely, as households opt for meters in the hope of lower bills,

⁶⁴ The government's sustainable development indicator suggested that, albeit briefly, the rate dropped from 15% of households in 1999/2000 to c.9% of households in 2002/2003

⁶⁵ Estimated in the partial RIA accompanying *The Water Environment (Water Framework Directive) (England and Wales) Regulations 2003* at up to £630m

⁶⁶ Estimated at £140m in additional opex in the first 5 years plus £1,960m capex, see *Consultation on private sewers transfer – implementation options*, Defra, July 2007. Defra has now announced that this transfer will take place in 2011; the consequence is estimated to be average bill increases of up to £12pa

⁶⁷ *Water and sewerage charges 2006-07 report*, Ofwat, 2007 and *Your Water & Sewerage Charges 2008/9*, Ofwat, 2008

⁶⁸ E.g. the Bristol and Dee Valley water companies

⁶⁹ Ofwat Press release 30/07

prices need to rise generally (in a process benignly called “tariff re-balancing”) to recoup the lost revenue.⁷⁰

4.3 The increase in average household bills over the period may yet in the event be less than that suggested by the price limits for 2005/10; last year they were expected to rise by “only” c.18% against the cumulative price increase limit of 23% but the result nevertheless, according to Ofwat, would still be a £46 increase between 2004/05 and 2009/10, to which the effects of inflation over five years still need to be added. At the time of the final determinations Ofwat expected that inflation would be around 2.5% per year, however, it looks as if the inflation rate is likely to be higher - the All-items Retail Prices Index (RPI) stood at 4.2% in October 2008, having touched 5.0% the previous month.⁷¹

4.4 The average figures conceal wide variations across the companies. The price limits range from 2.4% a year on average for Anglian, to 6.9% for South West among the water and sewerage companies. Customers of South West, Southern and Wessex will experience the largest percentage increase in their bills: 25% on average over the five-year period. The highest charging region is the South West with an average combined bill of £497 for 2008/9 (comprising £293 for sewerage and £204 for water).

4.5 For the water only companies the range for the current price control period of 2005/6 to 2009/10 is from an average reduction of 0.5% a year for Tendring Hundred to an increase of 4.8% a year for Folkestone & Dover.

Future prices: key factors

4.6 The main factors that influenced Ofwat’s decisions on the current price limits to 2010 included:

- increased operating costs arising from changes to taxation, pension and energy costs and legislative changes;
- increased activity necessary to maintain the asset network and improve security of supply to ensure no deterioration in services;
- further improvements to drinking water quality and the environment required by Ministers; and
- significant reductions in sewer flooding.

4.7 Of these, perhaps, environmental and water quality investment are likely to continue to play the biggest part and while it is still too early to be sure about the scale of water and sewerage price rises from 2010, many companies draft business plans have recently proposed increases significantly above expected inflation.

⁷⁰ *Future water and sewerage charges 2005-10: Final determinations*, Ofwat, 2004

⁷¹ Office for National Statistics

4.8 In a research paper in 2006, however, Ofwat explored the implications for financing and household customers' bills of four scenarios over the next 25 years⁷². Although Ofwat's predictions of what will happen may not come true, they cannot be ignored when considering the likely effects for domestic consumers. The results of modelling the four scenarios suggest that bills are likely to rise significantly from 2010, though by varying amounts depending on the specific underlying projections. Where environmental protection is given a high priority, and all the indications are that it will be, the two central cases indicate that household bills will increase between 16% and 18% before inflation in the period from 2009-10. The predicted consequence is that the proportion of *all* households in water poverty will rise from nearly 11% in 2009/10 (and approaching 40% of households on the lowest incomes), to 20% by 2015, higher even than before PRO4 and including as many as 50% in the Southwest where it will, most clearly, no longer be a problem mainly of lower income groups.

4.9 Prominent among the drivers is the Water Framework Directive which came into force in December 2000 with a series of implementation deadlines up to December 2015. The Directive establishes a river basin management approach within which demanding environmental objectives will be set, including ecological targets for surface waters. Ofwat is currently collaborating with Defra and others to develop understanding of the most appropriate measures to deliver the Directive but Ofwat has said that it expects the companies to contribute to meeting the environmental objectives. This work will feed into the next periodic review⁷³.

4.10 In addition, other issues are becoming increasingly significant, not least energy costs and the implications for the water industry of recent major flooding incidents. The "Pitt" Review reported in June 2008 on how the floods of the previous summer were managed and responded to by the Environment Agency, local authorities, the emergency services and others. Amongst others, it makes recommendations for protecting critical infrastructure, including water company assets, against flooding events in the future which the companies are expected to take up through Surface Water Management Plans. Even before its report, however, the Chairman of the Environment Agency called for action to design, plan and build "climate change proof" drains and sewers⁷⁴ and his Chief Executive was quoted as saying that water bills would have to go up consequently.⁷⁵

Local factors

4.11 Locally, a variety of schemes will impact on bills but it is worth highlighting one in particular. The Thames Tideway project is certain to place further upward pressures on water and sewerage bills in a region so far with moderate prices⁷⁶. The project is designed

⁷² *Water industry forward look 2010-30 Some possible views of the future*, Mason K, Ofwat, 2006

⁷³ *Ofwat forward programme 2007-08 to 2009-10*, Ofwat, 2007

⁷⁴ Environment Agency press release, 10 July 2007

⁷⁵ Telegraph website, 28 July 2007

⁷⁶ Thames' draft business plan published in August suggests price increases of up to 40% after inflation by 2015

to intercept sewage discharges to the river and transport the rainwater/sewage for treatment. (The London sewer system combines foul sewers with the system for collecting rainwater run-off. When the system becomes overloaded, overflows of sewage and rainwater discharge some of the excess into the River Lee and Thames to reduce the risk of sewer flooding of properties, and overloading of London's sewage treatment works.) The project is estimated to cost at least £2 billion and is likely to add around £37 to Thames Water customers' sewerage bills by 2017⁷⁷. This will be the largest single water industry project since privatisation in 1989, according to CCWater which has emphasised the need to consider consumers' willingness to pay in the decisions on the project⁷⁸.

Financial indicators

4.12 As well as capital investment and operational costs, Ofwat's views on key financial indicators will play a significant part in its decisions on future price limits as with previous periodic reviews. The cost of capital is a key indicator and is applied to the entire capital base of each company, not just new investment. The current global shortage of capital is likely to be concerning Ofwat and the companies alike and if the cost of capital is set too low, companies could find it impossible to finance the largest investment programmes yet proposed. On the other hand shareholders may gain windfall returns if the cost of capital is set too high. The current price limits are based on an assumed cost of capital of 5.1% post-tax in real terms for the water and sewerage companies, equivalent to 7.3% on a fully pre-tax basis (assuming a 30% marginal tax rate). Ofwat also allowed for a small company premium for the water only companies, ranging from 0.3% to 0.9% depending on the size of the company.

4.13 An analysis a few years ago by the National Consumer Council showed that domestic consumers' contribution (through household bills) to the ten water and sewerage businesses is significant, totalling £28 billion from privatisation to 1997/98⁷⁹. Of this, over £10 billion was extra money provided almost entirely by higher consumer prices. At the time of the last round of price determinations, there was widespread concern at whether the settlement was as fair as it should have been to consumers', as opposed to shareholders', interests; certainly, none of the companies appealed against their determinations and their reported returns since have been healthy enough and it is hoped, though without much confidence, that Ofwat will be more sensitive to such criticisms in the forthcoming periodic review.

4.14 What does not seem likely to come to the aid of hard-pressed consumers, however, is price competition between suppliers. While competition has, overall, had a beneficial effect in the domestic energy market, the recent interim report of a review of potential water markets⁸⁰ notes its inconsistency with policies to reduce water consumption and suggests that prices would be engineered to achieve them.

⁷⁷ Press release, Defra, 22 March 2007

⁷⁸ Press release, Consumer Council for Water, 14 March 2007

⁷⁹ *Prospects for Prices: consumer concerns*, National Consumer Council, 1999

⁸⁰ *Independent Review: of competition and innovation in Water Markets*, (the "Cave" review"), Defra, Nov 2008

5 Help with bills

The previous sections raise real concerns about the future affordability of water charges for the many households with below average incomes and others with above average essential need for water because of household size or medical conditions. Those concerns are not new and they are well-known, including to the government. Here, we look at the political response, such as it has been.

5.1 Not entirely oblivious to the prospect and consequences of rising prices, the Secretary of State's Initial Guidance to Ofwat as part of PRO4 said in January 2003 that due weight should be given to the impact of bills on vulnerable customers. Underlining that at the end of the year, the Commons Environment, Food and Rural Affairs Committee's Inquiry into water pricing⁸¹ concluded that *"..the difficulties some customers face in paying their water bills are a matter of great concern...Measures to help vulnerable customers do not appear to have been effective."* Their report continued: *"People suffering from serious difficulty...should be helped through the benefits and tax credits system"* and *"[The government] should ensure that mechanisms to help people pay...take account of...regional variations..."*.

5.2 Supporting this recommendation six months later, the Environmental Audit Committee noted⁸² *"Water prices are going to continue to rise for the foreseeable future. As a result, there will be an increasingly large proportion of the population on lower incomes that will find it difficult to pay water bills."* adding: *"...the government is going to have to address this issue seriously."* At about the same time, a Water UK "think tank" reported⁸³ *"Current legislation, tax rules and benefits do not reflect the way water prices are set and water services [are] delivered, nor do they accommodate the regional variation in water charges."* recommending *"Government needs to review how help is provided through the tax benefit and credit system and look at alternatives such as housing benefit and council tax relief."*

The cross-government review

5.3 The government's response was to initiate an inter-departmental review of water affordability to which the CIEH contributed. It reported in November 2004⁸⁴. While predicting that for average and higher income groups, water charges, though increasing, would remain a small share of overall household disposable income, it confirmed they were more likely to become a concern for other groups including lower-income working households, non-working households and pensioners – groups already paying a higher proportion of their income in water charges and not necessarily falling within the definition of "vulnerable". Actual rises would depend on where people lived, however: the highest bills

⁸¹ *Water Pricing*, Environment, Food and Rural Affairs Committee, December 2003

⁸² Recommendation 20 of the Inquiry into the Periodic Review and the Environmental Programme, May 2004

⁸³ *Debt, charging and social impacts*, note 1 above

⁸⁴ *Cross-Government Review of Water Affordability*, Defra, November 2004

were expected to be those for South West Water, at £444 by 2009/10; the lowest in Northumberland at just £260, reflecting the position of nine years earlier. In fact, both predictions were exceeded by 2006/7⁸⁵.

5.4 The report went on to map out a number of responses, including an expansion of the Vulnerable Groups scheme (actually under review in government since 2001), consideration of changes to the direct deductions scheme (for benefits recipients) and, in particular, a pilot scheme to target water affordability assistance to lower-income households. Sharing best practice between the companies on key affordability and debt issues, a revision of Ofwat's debt recovery guidance⁸⁶ and further studies on the effects of the charging system completed the list.

5.5 All three, however: the Vulnerable Groups scheme, the sharing of best practice and the Affordability Pilot, have at their heart the up-take of meters. No matter a household's hardship, underlining the philosophy behind the 1999 Act, access to the Vulnerable Groups scheme is limited to those on measured supplies and the government has expressly ruled-out extending it to help large families with unmeasured supplies. Best practice in supporting lower income customers having trouble with bills or in debt, should, Defra's report said *"..focus on...Promotion of the free meter option (targeted at lower income customers)"* and *"A check to see if switching to a metered supply could be cheaper..."* was one component of the Affordability Pilot. That reported last December⁸⁷ and the results, though not easy to interpret, bear examination.

5.6 Defra, which sponsored the experiment, was expectedly up-beat⁸⁸. It reported that, overall, the programme had been highly successful, the largest financial gains for the 520 households taking-part coming from the results of benefits entitlement checks and from unmeasured households switching to metered tariffs. It was most successful in helping those households which spent the largest proportion of their disposable income on water services. Publicly at least, Ofwat's response⁸⁹ mirrored Defra's but CCWater took a markedly less enthusiastic view⁹⁰. Pointing out that the pilot area exhibited both high bills and high levels of economic deprivation (53% of the sample for whom data were available were in water poverty at the beginning) but that the problem of water affordability was one faced by increasing numbers of households, it noted that only 142 among the cohort appeared to have been eligible for additional benefits in the first place and only 43 of them were subsequently actually successful in their applications. Though they had raised their incomes to the tune of just under £21 per week each, and that was undeniably good for them, simply realising benefits entitlements clearly was not the answer to unaffordability.

⁸⁵ *Water and sewerage bills 2006-07*, Ofwat

⁸⁶ Now in *Dealing with household customers in debt - Guidelines*, Ofwat, March 2007

⁸⁷ See <http://www.defra.gov.uk/environment/water/industry/affordability/pdf/final-wrc-report.pdf>

⁸⁸ Defra Press release 490/07, 20 December 2007

⁸⁹ Ofwat Press release 46/07

⁹⁰ CCWater Press release 37/07

5.7 In fact, 45 % of the sample households remained in water poverty at the end of the trial. Echoing the long-held view of the water industry, CCWater called again for direct assistance to vulnerable and disadvantaged consumers through the tax and benefits system.

5.8 Most striking was the claim that the average bills of the 74 households which opted for meters (of 109 advised that it might be beneficial) fell by nearly 50% (16% among all participants). None would have switched had the prediction been that they would not gain, of course (and, indeed, participation in the trial in the first place is likely to have been affected by the perception of benefit) but whereas only 12 qualified for the Vulnerable Groups scheme but none actually applied, that cannot explain how. While 225 households had at least one water efficiency device ("hippos", spray taps, low-flow shower heads etc) installed, the report attributes only 11% of the reduction to those so the conclusion must be that the remainder came from changing patterns of use.

5.9 Various studies were also recommended to look at how lower income groups may be affected by any change to the current charging system. UK Water Industry Research (UKWIR) – an industry-funded research body – is currently carrying out a study in collaboration with Defra on the distributional effects of alternative charging systems, which is modelling the effects of different tariffs.

Current help with water bills

5.10 Despite the cross-governmental review though, there has been little substantive change in the extent of help available to people on low incomes to cope with water and sewerage bills. WaterVoice said: "*It is the responsibility of the government to set the strategic framework in which policies to address affordability are delivered... The cross-government steering group has given no indication of how, and when, this overarching strategy will be developed.*"⁹¹

5.11 We mentioned the Vulnerable Groups scheme above and, touching on that again, outline below what else is and is not available in terms of direct financial assistance from the state, the highly restricted help available through statutory requirements on water companies, "social tariffs", and discretionary assistance from charities financed by water companies. At the end, we draw comparisons with the energy sector, and comment on the overall ineffectiveness of the help available with water bills for people on low incomes.

What help is available with water bills?

From the state

5.12 There is no explicit financial help available through social security benefits or tax credits to assist people with water and sewerage bills. The only protection afforded by the

⁹¹ *Comments on 'Possible Scope for Improvements of Existing Forms of Assistance', WaterVoice, 2004*

state is that it is illegal to disconnect homes from their water supply for non-payment of bills⁹². Pre-payment devices are, similarly, out-lawed, however water debts can be pursued (and increased by the addition of costs) through the court system.

5.13 Up to 1988, direct assistance with water bills was available through the supplementary benefits system – the predecessor of income support – when claimants could obtain payments to cover these bills on top of their basic weekly benefits. But this help no longer exists; instead, a notional amount is meant to be included within basic income support. The level is unknown, as successive governments have refused to give a breakdown of the levels of spending that income support is intended to cover, but we know it long ago ceased to match actual bills⁹³.

5.14 In its report on water pricing noted above, the Commons Environment, Food and Rural Affairs Committee recommended that people suffering from serious difficulty in paying their bills should be helped through the tax and benefits system. Recently, even a former water minister has agreed⁹⁴ but so far, however, the government has ruled that out. Its rationale was outlined in its 2004 report on the cross-government review which said that the water affordability problem was strongly outweighed by government action to increase the incomes of lower income households through the tax credit and benefits system. Making further links between water charges and taxes and benefits would, it said, have significant drawbacks and, in general, it was not the purpose of the tax credit and benefit systems to provide targeted support for the costs of particular goods or services.

5.15 Another recommendation that emanated from the government's review of water affordability was that government and Ofwat should consider the case for a review of the current RV based charging system for non-metered households in the light of the findings of the Lyons inquiry into Local Government funding. Its report was published in March 2007.⁹⁵ Welcoming the publication of the report, and despite that it has made statutory provision to do so⁹⁶, the government nevertheless made it clear that it has no plans for revaluation or changing the current council tax banding structure during the life of this Parliament; any decision beyond that would be a matter for the next.⁹⁷

From cross-subsidies

Vulnerable Groups – WaterSure

5.16 A very limited form of help with water bills is available for some metered households who need to use more water as a result of low income and either a prescribed medical

⁹² Though some, e.g. Dwr Cymru, still, dubiously, claim the right to disconnect mixed-use premises

⁹³ See table 6 in Fitch & Price, note 12 above

⁹⁴ Elliot Morley MP, see EDM 2504, put down on 13 November 2008

⁹⁵ *Place Shaping - a shared ambition for the future of local government*, Sir Michael Lyons, The Stationery Office, 2007

⁹⁶ In the Local Government Act 2003

⁹⁷ Communities and Local Government Press release, 21 March 2007

condition or because of the number of people in the home. This is provided under the government's "Vulnerable Groups" Regulations which took effect in 2000. The scheme is intended to ensure that this closely defined group of customers do not have to cut down on essential water use, potentially compromising their health, because of problems in affording measured charges.

5.17 Though Ofwat has, in the past, maintained that the very existence of the scheme disposed of any question of unaffordability⁹⁸, we undertook an analysis of it in our last paper. It was not flattering. Of the government's estimate of 300,000 eligible households, by the end of the 2000/01 charging year, just 0.6% had, in fact, benefited; of our larger estimate, the take-up rate was just 0.4%, both astonishingly low take-ups, notwithstanding all their inherent uncertainties. Changes have been made to the scheme since⁹⁹, to include dependent children under 19 and to increase the range of medical conditions recognised as requiring unusual water consumption. Better publicity (and re-branding the scheme as "WaterSure") has, however, managed to raise the numbers benefiting now only to a little over 24,000^{100 101}, still less than six percent of our estimate of eligible households.

5.18 Apart from questions about take-up, there are some significant difficulties inherent in the scheme. First, it offers a very limited amount of help only to certain metered households, and it is not clear to what extent it makes a difference to the overall affordability of charges for those who do qualify; still unrelated to actual bills, simply capping beneficiaries' bills to the average for their region, the scheme's value varies dramatically from one region to another. It is of less benefit where bills are high - this concessionary charge is higher in the southwest than typical charges to small households everywhere else - and even less when they are rising. Secondly, many people may remain understandably reluctant to divulge details about a medical condition in order to apply, particularly to a private water company. Some may also be deterred from applying because of the need to obtain and pay for a certificate from a medical practitioner. It may be difficult as well for some people to decide that their use of water is above average, particularly if they have fluctuating medical conditions such as arthritis.

5.19 Another issue is the difficulty that could arise if take-up does increase. The scheme is administered by the water companies and thereby financed through cross-subsidies across their customer base. As Defra's impact assessment said: *"If the criteria are too tightly drawn, then genuine cases may not be eligible for protection, leading to hardship and even risk to health if customers attempt to minimise their water use. If the criteria are too broad, then it will appear unfair to other customers who will resent the burden of the cross-subsidy. The scheme would also be expensive for companies to administer, and if this cost were passed back to customers there would be another upward pressure on bills."* This point

⁹⁸ Personal conversation with then DG, Ian Byatt

⁹⁹ *The Water Industry (Charges)(Vulnerable Groups) Regulations 2005*, SI 2005/59. The statutory scheme applies only in England though a voluntary equivalent operates in the Dwr Cymru and Dee Valley areas.

¹⁰⁰ Figure for the 2007/8 charging year, Ofwat

¹⁰¹ Split between c.14,000 for large families and c.10,000 for medical conditions / Ofwat

was not lost on the then Ofwat National Customer Council which from the beginning, argued for tight limits on the scheme.

Social tariffs¹⁰²

5.20 Ofwat has traditionally opposed the use of so-called “social tariffs” that offer lower charges to particular groups of consumers, citing its duty to secure that no undue preference or discrimination is shown by companies in fixing charges¹⁰³ but, in truth, due to more ideological reasons. Its only exception to this was where the government had made explicit statutory provision as part of the Vulnerable Groups Regulations; Ofwat’s view being that social policy is essentially a matter for the government to promote through the tax and benefits system, and that it should not be a matter for private water companies¹⁰⁴. The former National Customer Council and its successor, WaterVoice, agreed¹⁰⁵. As noted above, though perhaps for less altruistic reasons, the industry takes the same view.

5.21 Consequently, though the Secretary of State has given guidance to the Director General of Water Services to the effect that, where companies devise well considered and workable proposals for social tariffs which do not have an unacceptable impact on other customers’ bills and do not represent “undue discrimination”, such tariffs should be allowed in charges schemes¹⁰⁶, few “social tariffs” have been offered in the water sector apart from those that have resulted from the Vulnerable Groups regulations.

5.22 One exception has been Anglian Water’s *AquaCare plus* tariff, based on a higher standing charge and a lower charge per cubic metre. It is aimed at metered customers who use more than 75 cubic metres of water a year and receive one of the following benefits:

- Income Support
- Income based Jobseeker’s allowance
- Housing Benefit
- Council Tax Benefits
- Working Tax Credit
- Child Tax Credit (except families in receipt of the family element only)
- State Pension Credit

5.23 Anglian also offers a *SoLow* tariff for customers with low consumption, aimed at customers who use less than 75 cubic metres of water (or for sewerage-only customers who discharge <67.5 cubic metres of sewerage per year). More, perhaps, an environmental tariff than a social one, there is no standing charge but a higher charge per cubic metre.

¹⁰² For more detail see *Waste Not, Want Not: Sustainable Water Tariffs*, WWF, (2007), pp25-9, available at: http://www.wwf.org.uk/filelibrary/pdf/water_tariffs_report01.pdf

¹⁰³ In the Water Industry Act 1991, see section 9 below

¹⁰⁴ *Affordability and the structure of household water charges – options*, Briefing Note, Ofwat, 2005, reiterated in *Ofwat’s future strategy for customer charges for water and sewerage services*, August 2008

¹⁰⁵ WaterVoice Policy Statement, June 2005

¹⁰⁶ *Cross-Government Review of Water Affordability Report*, Defra, 2004

5.24 Mid-Kent, one of the water-only companies, also has a *Low User Tariff* and, just last year, Wessex Water introduced its *Assist* tariff, aimed at customers in receipt of particular benefits and who, after confirmation from Citizens' Advice or a debt agency that the person's household genuinely cannot afford the current level of charges, may pay a fixed amount, ranging currently between £88 and £380¹⁰⁷. The company (and apparently Ofwat) justifies the reduction by the claim that it costs no more than it would have done to take the customer to court.

5.25 This year, however, amidst concerns that Ofwat has been overly concerned with the financial management of the sector, the Secretary of State repeated the message that he expected Ofwat to ensure the companies charge consumers in a way which is both fair and (sic) protects vulnerable groups, this time without the explicit strings attached¹⁰⁸. Ofwat has responded by sanctioning a number of experimental tariffs¹⁰⁹ including two rising block tariffs with different sized blocks (one with a family size concession), two purely seasonal tariffs, a compound rising block and seasonal tariff and a concessionary tariff for Water Direct payments. How it now deems these as not unduly discriminatory or why it apparently did so before is not clear. Its draft forward programme for 2009/10 – 2011/12 still, however, does not include the word "affordable".

From charities

5.26 A number of water companies have set up independent charitable trusts which can offer grants to help individuals and families to meet arrears of water and sewerage charges and, in some cases, other household bills and costs. The Charis Foundation currently administers the Anglian Water Trust Fund. Severn Trent and United Utilities have similar charitable trusts and Thames has recently added its name to the list, following criticism of a large jump in its profits¹¹⁰. The EOS Foundation administers trusts on behalf of some of the water-only companies. Not entirely altruistic, the companies' donations are off-set against corporation tax and taxpayers in general hence contribute to company revenues.

5.27 The inherent problem with reliance on charitable trusts to offer assistance with water bills is the discretionary nature of this form of help, in a sense compounding the inequity of the regional disparities in charges. Consumers have no basic right to this assistance as eligibility is at the discretion of the charity concerned. There is little transparency around their decisions and no right of appeal. As a result, such charity-based help runs counter to concepts of equity and accountability. On the other hand, they seem to be useful for the companies in helping some customers to clear their debts, as well as providing PR benefits.

¹⁰⁷ See Wessex Water Charges Scheme 2008-09, Section 8A and Schedule 12 available at: <http://www.wessexwater.co.uk/publications/index.aspx>

¹⁰⁸ See para 2.25 of *Statutory Social and Environmental Guidance to Ofwat*, Defra, August 2008

¹⁰⁹ In the Folkestone & Dover, Wessex, Dwr Cymru and (former) Mid-Kent areas, see www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/Content/rpt_tar_2008-09householdcustinfo

¹¹⁰ See CCWater Press Release, 10 June 2008

Comparisons with energy

Help from the State

5.28 Though domestic energy costs are generally substantially higher than water costs, average annual bills having risen sharply this year¹¹¹ and now approaching £1,300¹¹², the energy sector provides an interesting basis for comparison with the water sector. That now seems as true philosophically as practically: Energy and Climate Change Secretary Ed Miliband has recently said¹¹³ *“Sustainability, security and affordability are all challenges which the market alone cannot be guaranteed to solve”*, signalling a more interventionist role to come for government in fighting climate change, curbing fuel poverty and securing long-term energy supplies. Most notably, the government and the devolved administrations are publicly committed to eradicating fuel poverty throughout the UK by 2018 with an end to fuel poverty among vulnerable households by 2010¹¹⁴.

5.29 Two schemes aimed at helping particular groups to cope with energy bills exist currently: Winter Fuel Payments and Cold Weather Payments. The Winter Fuel Payment is a universal non-means-tested payment for 12 million households that include an older person. People aged 60 or over receive £250 and those aged 80 or over get an additional £150, increased this year from £200 and £100 in the light of sharp price rises. The future of these payments is uncertain beyond the end of the current Parliament. Cold Weather Payments are made during extended periods of very cold weather to help towards heating costs. A set amount (currently £25, increased from £8.50) is automatically paid to people who meet the qualifying criteria during each week of very cold weather. Not taxable, eligibility is based on receipt of specified benefits or tax credits.

5.30 There is ongoing debate about the effectiveness of such payments in eliminating or reducing fuel poverty, largely due to the end of low-priced energy now back almost to its 1998 level¹¹⁵. For instance, one advantage of providing winter fuel payments on a universal basis is that it overcomes the problems of non-take-up and stigma which frequently characterise means-tested benefits. However, the scheme is not available to other groups in the population who are especially at risk of fuel poverty, such as people on low incomes and disabled people. Overall, though, such schemes represent a direct form of assistance from the state and thus a recognition of the role of the state and public policy in helping people to cope with the costs of an essential service such as energy.

¹¹¹ British Gas, for example, raised its prices twice this year, first, by c.16% in January, then again, by c. 35% in July

¹¹² The average annual dual fuel bill among six leading suppliers is now £1,293, according to uSwitch, reported in the Times, 10 December 2008

¹¹³ In a speech given at Imperial College, London, 9 December 2008

¹¹⁴ See *UK Fuel Poverty Strategy, 6th Annual Progress Report*, DBERR, October 2008

¹¹⁵ Approximately 4.5 million UK households are now estimated to be in fuel poverty, compared with 4.75 million in 1998

Social tariffs

5.31 The availability of “social tariffs” as a potential means of tackling affordability is more widespread in the energy sector where suppliers have been actively encouraged to introduce them by the government and by the energy regulator, Ofgem. They are predicated on the assumption that such tariffs can be an effective way of tackling fuel poverty but without much in the way of a published evidence base. Two recent studies have sought to fill this gap and their findings are instructive for the water sector as well as energy, as debate continues about the best ways of tackling water poverty and improving affordability. A report for UNISON by the Centre for Sustainable Energy and the National Right to Fuel Campaign explored the policy issues associated with social tariffs for the energy sector.¹¹⁶ It identified a wide range of social tariffs, each of which had different eligibility criteria, targeting method, size of discount and coverage. Many customers still paid more than Direct Debit consumers of the same company and, as the report said: *“To what extent can a tariff be termed “social” if beneficiaries still pay more than consumers who tend to be more affluent?”*

5.32 The report called for a full comparative evaluation of social tariffs and alternative or complementary policy options, including the effectiveness of social tariffs in terms of their impact on national fuel poverty levels and on individual households. The latter should examine issues of stigma, perceptions of tariffs and effects on consumption behaviour, as well as impact on households’ fuel poverty status. The report recommended that the government should consider whether there are more effective ways of making sure fuel is affordable, using the results of the evaluation proposed, before it reaches any decision over whether to prescribe social tariffs.

5.33 In addition, energywatch¹¹⁷ conducted a consultation on social tariffs in the energy market. Its report on the results of this exercise recommended a social tariff model built on, but not limited by, minimum standards, which it said had the potential to deliver significant assistance to eligible households and to complement and bolster existing fuel poverty initiatives.¹¹⁸ The report emphasised, however, that social tariffs offered in isolation would not eradicate fuel poverty and that they should form a part of an Energy Assistance Package, which suppliers should be obliged to offer.

5.34 According to energywatch, all suppliers should be also required to adopt specified eligibility criteria for social tariffs. These should be based on a rigorous evaluation by the government to determine the maximum possible correlation between the characteristics which suggest a susceptibility to fuel poverty and the actual fuel poor population. Which group(s) should be eligible to receive Energy Assistance Packages from their supplier should

¹¹⁶ *Social tariffs – a solution to fuel poverty?*, a report to UNISON, Baker W, Centre for Sustainable Energy and National Right to Fuel Campaign, 2007

¹¹⁷ From 1 October this year, absorbed into Consumer Focus

¹¹⁸ *A Social Responsibility? The energywatch consultation on the nature of social tariffs in the energy market: report and recommendations*, energywatch, 2007

be determined, energywatch considered, by the government in consultation with interested parties. As well as social tariffs, packages would include seamless referral to comprehensive benefits entitlement checks to maximise household income wherever possible together with the provision of advice and the installation of energy efficiency measures through automatic referral to schemes such as Warm Front in England and its equivalents in the devolved nations (see below).

5.35 In considering how social tariffs should be financed, energywatch noted the views of organisations such as National Energy Action that direct taxation is the most equitable means of providing for subsidy but was concerned that this would be at the mercy of changing priorities and subject to cuts. Its view was that, although cross-subsidy would not be its first choice, that represented the only currently available option for achieving a secure, sustainable and sufficient level of funding. In terms of the potential effects for energy bills, energywatch concluded that its recommended focus on a “deep and narrow” approach to deliver a meaningful level of assistance to a limited group of consumers should ensure that the impact on any household’s bill was modest and far short, when the cost was spread evenly across the entire consumer base, of a level that would risk being punitive to consumers at the margins of eligibility.

Help with energy efficiency

5.36 Warm Front is the government's main directly funded programme for tackling fuel poverty in England. The scheme was launched in 2000 and is administered by the EAGA Partnership. Currently a Warm Front grant of £2,700 or up to £4,000 (if oil central heating has been recommended) can provide a package of insulation and heating for domestic properties. Similar schemes are provided by the devolved administrations.

5.37 To qualify for help through Warm Front, householders must be aged 60 years or over and in receipt of an income related benefit; alternatively, they must have a child under 16 and be in receipt of designated income related benefit or tax credit; or be receiving a designated disability related benefit or Disabled Person's Tax Credit. Grants are also available to pregnant women who are in receipt of a maternity certificate (MATB 1) as well as a designated income related benefit.

5.38 Under the Energy Efficiency Commitment (EEC), energy suppliers are required to achieve targets for the promotion of improvements in domestic energy efficiency. The EEC contributes to the Climate Change Programme by cutting greenhouse gas emissions. In the past, at least 50% of energy savings had to be focused on a priority group of low-income consumers in receipt of certain benefits and tax credits/pension credit, which was expected to contribute to the eradication of fuel poverty. The energy regulator, Ofgem, is responsible for administering the EEC scheme.

5.39 The third round of the EEC, now known as the Carbon Emissions Reduction Target for 2008-2011, was brought into effect on 1 April this year. Under this revised scheme, the level of target carbon savings has been increased, amounting to roughly a doubling of the activity under the existing Energy Efficiency Commitment 2005-08 (EEC2) and though the proportion of carbon saving sought in respect of the priority groups has been reduced to 40%, a new group of over 70's has been added. Worth in total c.£1.5 billion over the next three years, the potential non-ongoing costs to consumers (if passed on in full by energy suppliers) are estimated to be around £97 over the three-year period. The average annual ongoing benefit to consumers in terms of lower energy bills or increased comfort, would be around £31 a year for the lifetime of the measures.

5.40 A stark contrast therefore exists both qualitatively and quantitatively between the help available with energy bills and with energy efficiency measures and the extremely limited assistance available with water charges and water efficiency devices. Although the adequacy of the help available in the energy sector continues to be debated, there is at least a recognition of the role of the state and public policy in helping people cope with the costs of an essential service such as energy. This clearly contrasts with the lack of direct state help with the costs of water, possibly the most essential service.

5.41 On the grounds of equity and transparency, reliance on discretionary help from charitable funds with water bills is not to be recommended and would represent a retrograde step. Lessons can also be learnt from the energy sector about the need for caution in seeing social tariffs as a means of tackling water poverty. In addition, as a later section demonstrates, consumers are not necessarily favourably disposed to the use of such cross-subsidies. Fundamentally, it is questionable whether tariff structures *can* be adapted to ensure greater affordability for people on low incomes.

Water charging: a submission to the independent Review of Household Water Charging and Metering for Water and Sewerage Services

6 Options for charging

Successive Ministers have signally failed to provide a modern basis for unmeasured charges and maintained the incentives for consumers to switch to meters. The argument that measured charging is inherently fairest has, however, developed with little examination of whether this is true in practice and for all households, especially those on low incomes. Turning the clock back, reversing this trend, would be difficult but there are, nevertheless, other options. Underlying them are competing models for the provision of water services – the so-called “social service” model and the more business-oriented one adopted in 1989 and followed since.

General Principles

6.1 This paper is principally about England and Wales but water charging is an issue in N Ireland too. We look at the situation there (and in Scotland) at the end of this section but in a 2003 paper¹¹⁹ on the topic, the General Consumer Council for Northern Ireland listed a number of principles for any system of water charging. They included, first, that public health must continue to be protected, then that access must be affordable, supply be continuous and the system be fair, transparent and sustainable. Our own National Consumer Council¹²⁰ endorses a similar approach including the principles of fairness, sustainability and cost-reflectivity. A “think tank” prominent in utilities issues, the New Policy Institute, suggested social justice, sustainability and economic efficiency so there is a measure of agreement among a variety of stakeholders. We started from the same point when the CIEH responded to the government’s consultation paper on the future of water charging¹²¹. Ideally, we wrote, any system of water charging would be fair, broadly cost-reflective, cheap and simple to operate, comprehensible, predictable and durable.

6.2 Of these, fairness is perhaps the most important. We show later on that it is important to consumers too but it is not as simple a concept as it seems. For us, it requires above all that water should remain affordable in reasonable quantities, not just subsistence quantities; it is about maintaining an acceptable quality of life according to societal norms, not just surviving, and it means affordable to everyone, not just to some notional “average” household. This argues that the inherent cost of any charging system should be as low as possible.

6.3 A new charging system should be fair in an historic sense too which is to say that the incidence effects of a change are important. Fairness also suggests that the chosen system should be universal such that neighbours do not pay different amounts for essentially the same service by reason only of their supplier's preference for a particular system. But perhaps it is already too late for that.

¹¹⁹ See note 136 below

¹²⁰ From 1 October 2008, now part of the new “Consumer Focus”

¹²¹ *Review of the Water Charging System in England and Wales*, DETR, June 1997

6.4 It gets more complicated, however. While, as we say, any fair system of charging would also bring affordability, Fitch¹²² pointed out that the reverse is not necessarily so, i.e. a system bringing affordability is not necessarily fair. Affordability is essentially about money whereas fairness is about social justice; the former is a concept of the marketplace, corrected perhaps but the latter is more reliant on public policy. Thus if water charges were capped at 3% of income, they would be affordable to all yet their burden on poorer households would still arguably be unfair and *“confining the debate...to affordability...has the potential to perpetuate social injustice. This would be even more the case if the chosen affordability benchmark were...ungenerous and if affordability schemes were to be ineffective.”* The suggestion is that the very need for subsidies indicates unfairness in a social sense.

6.5 It boils down to a choice between taxing and charging and we apply this distinction below. The former relates charges to ability to pay and it is the way currently chosen in N Ireland and Scotland. Though the government's 2004 review acknowledged the relevance of the Lyons review of local government funding to water charges in England, four years on however, nothing more in this direction has been heard. Ofwat, meanwhile, continues to follow the path laid down in the 1980's and sustained by the prevalent consumer culture, that is a regulatory model based on competition, disingenuously relying on the social security system to deal with its casualties.

6.6 The principle of cost-reflectivity is related to fairness. It means that consumers as a whole should pay for what they get; the practice, currently, of offering meters at no charge, recovering lost revenue from remaining unmeasured consumers breaches this principle. It also brings the typical balance of fixed and variable elements of bills (noted in the next section) into question. Nor, generally, should one group of consumers subsidise another, at least for commercial reasons, either within or between economic sectors though both practical considerations and the principle of simplicity indicate some pooling of costs which Ofwat condones, at least at present. This principle is upheld by the ban on undue discrimination etc. in the Water Industry Act which should remain (though perhaps “undue” might be elucidated) as a safeguard to consumers and companies alike.

6.7 There are, however, limits to this principle, in particular that charges should not reflect the costs of inefficiency, including those of an unnecessarily expensive charging system. The different cost bases of the companies, exacerbated by the differential impact of drinking and wastewater quality requirements, have also raised concerns of equity which before privatisation might have been relieved by some sort of equalisation scheme. What costs are assigned to consumers (for example, the costs of highway drainage (in N Ireland recharged to DRD Roads Service)) are important for fairness and the size of bills too.

6.8 Comprehensibility is important for accountability; consumers should be able to understand what they are paying for so they can check the accuracy of bills and judge the

¹²² *Fair and affordable water*, Fitch M, UNISON, 2005

value of what they receive. They should be able, with some certainty, to predict the size of their bills for budgeting purposes. This helps to minimise water debt. Predictability also removes an element of uncertainty from the undertakers' businesses, important for their planning and for investment decisions. It may be important to the running of any benefits system too. Simplicity is the key to comprehensibility; this argues against the choice of compound systems and tariffs.

6.9 Finally, whatever system the majority end up with should be durable; the cost, controversy and inconvenience of introducing any new system mean that whatever is chosen must last and that interim "solutions" should be avoided. That means that, despite its obsolescence, we think the present system for unmeasured charges based on rateable values ought to continue until such time as a suitable replacement can be commenced throughout the country; there is no obstacle in principle to houses built after March 1990 being assigned a notional RV in the meantime. Keeping these principles in mind, the principle options are:

"Taxing" systems¹²³

6.10 Since they will, inevitably, be replaced, we will not consider unmeasured charges based on rateable values any further. Charges based on their first cousin, Council Tax bands, have been used for several years in Scotland however.

Council tax bands

6.11 Based on capital values rather than rental values and aggregated into bands, such a system nevertheless scores highly on familiarity, simplicity and low operating cost. It could be introduced relatively easily since the data requirements are already met; water bill payers are not very different from CT payers in terms of incidence. There is a correlation, albeit not perfect, between property value and water usage and bills would be, as now, easy to understand and predictable given the setting of an annual "poundage". As a basis for local taxes, they appear here to stay and though based on valuations going back to 1991, those will be up-dated in the future. A big advantage is the existence of a fully compatible benefits scheme with a high take-up rate. Their historic fairness is less clear though the incidence effects would vary from area to area and are not so much a matter of the number of people who would experience a change (in practice, only increases would cause concern anyway) but of the size of changes.

6.12 A criticism of using Council Tax bands is that there are, currently only eight of them, A-H, resulting in a narrower range of charges than now yet there is provision in law to increase them whether through introducing intermediate bands or, in particular, splitting the lowest band, and to increase the differential between the highest and the lowest, currently

¹²³ A useful summary of the various charging schemes can be found in *Towards a sustainable water charging policy*, NCC, 2002

only 3:1. In a system *based* on CT bands, however, there would remain the ability to add a “modifier” to vary that ratio further, as is done now with RV-based charges, i.e. to vary the rate of payment between different bands, making such a system more progressive. Another criticism is that such a charging basis offers no direct incentive for conservation; maybe not, but we look at that below and in the next section.

6.13 Several of the water companies, for example Wessex¹²⁴ and Dwr Cymru, and a number of Ofwat's Customer Service Committees have favoured this option in the past but the Director-General has criticised it for inappropriately linking water charges to a local authority tax. This is a specious argument, however; there would be no linkage nor, as the claim implies, would water be paid for, any more than now, through taxation. There would simply be a coincidence in the underlying use of the capital values of houses. A system based on Council Tax bands has been the CIEH's preferred option in the past.

Licence fees

6.14 A system which found some support, though in peculiar circumstances, among N Irish consumers, two of our own “water-only” companies¹²⁵ use flat licence fees (as does Iceland, apparently). Licence fees reflect the fact that the majority of the undertakers' costs are linked to infrastructure and are relatively fixed; only a small proportion is linked to volumes supplied. Taking the view that it is not cost-effective to apportion that minority, in essence the whole is simply divided among the user base. That division may be equal or it may be loaded according to some criterion or other. Less appropriate to areas with increasing demand where variable costs are a greater proportion of the whole, the major criticism of them is, again, that they provide no incentive to conserve. They are also inevitably regressive, poorer consumers paying the same as their richer neighbours regardless of usage, but they are as cheap and simple to operate as can be.

6.14 A fee based on the number of occupiers would take quite good account of usage and be more cost-reflective but would not necessarily be related to ability to pay. It is said to correlate quite well with RVs so the incidence effects would be small but while easy to understand and predictable, because of the fluctuating size of households and the difficulty of checking on that, it would be difficult to implement. It would share some at least of the unpopularity of the Poll Tax. Systems based on so-called “Water Service Factors” - floor area, numbers of rooms, numbers of appliances etc - while also correlating well with the present system and said to be sensitive to usage are nevertheless complicated and difficult to implement and maintain. Their data requirements are greatest and they provide the least obvious linkage to present benefits frameworks.

¹²⁴ Keith Harris, Wessex's Director of Finance and Regulation has said that “*Of all the options, Council Tax can be said to be the least worst*”, PUA Conference, February 2005

¹²⁵ In the Hartlepool area of the Anglian region and the northern part of the Sutton & East Surrey region

“Charging” systems

Metering

6.15 Metering has, in theory, two roles: one simply as a “pay-as-you-consume” charging base, the other more deliberately for conservation. The distinction lies principally in the accompanying tariff. Meters intended purely for charging nevertheless exert some coincidental conservation pressures as we shall come on to see. How much, and on whom, nevertheless is debateable.

6.16 The mechanics of metering need little explanation but it is worth noting that, for technical reasons, it is thought not practicable to apply to up to c. 2m dwellings (meters cannot be applied to shared accommodation or, for example, to blocks of apartments with a common hot water supply). Meters are expensive to supply and install¹²⁶ and require replacement at approximately 10 year intervals. Unlike unmeasured charges which can be calculated from a desk-top, meters require individual reading and every bill is potentially different. As a charging system nevertheless, measured charging is readily understood by users though the size of bills is unpredictable, not helped by meters’ usual location (in the interest of reading convenience) in a rain-filled hole in the pavement making it very difficult for consumers to monitor their consumption and hence, to moderate that rationally. Internal meters do not seem to be monitored any more closely, however¹²⁷. There have also been concerns about the engineering standards of meter manufacture¹²⁸ and installation which can lead to the contamination of water. As operated now, metering, of course, does not meet social fairness as described above.

Hybrid systems

6.17 Bridging the gap between pure “taxing” systems and “charging” systems are some hybrids, of which, actually, most current bills are examples. Whether measured or, in particular, unmeasured, most bills combine a fixed element – the standing charge, representing fixed costs including administration – and a variable element whether dependent on the volume of water supplied or the product of a rateable value and the prevailing poundage. This is said to reflect both short-run and long-run costs well. Like licence fees, the larger the fixed element, the more regressive hybrids are likely to be nevertheless the fixed element is particularly easy to off-set through benefits. As for sustainability, the NCC in its description notes: “...*the higher the fixed charge, the lower the...environmental signal unless some draconian tariffs are to be introduced...*”. At the same time, the lower the variable element, the less is the justification for metering in terms of a return on the investment required.

6.18 Using sophisticated economic arguments to address the perceived problems with the

¹²⁶ A typical external installation costs c.£200, see *Future Water*, Defra, Ch 8 para 9.

¹²⁷ *Critical review of relevant research concerning the effects of charging etc*, UKWIR, 2005

¹²⁸ *Water Meter Report*, LACOTS 1993

present main alternative systems of undue financial pressure on poorer households, the lack of cost-reflectivity in the typical balance of fixed and variable elements and that uniform fixed charges do not consider ability to pay, the New Policy Institute long ago made a case for a hybrid multiple tariff system with a two-tier volumetric rate¹²⁹. Under their proposal, each household would be granted a *per capita* allowance at zero or very low cost, charges for excess volumes being charged at a marginal price lower than current tariffs. The cost of the basic allowance would be added to a fixed charge, which, given that it should be higher than under present tariffs, would mean that any household using less than its total allowance would pay no more. That is, its bill would be comprised entirely of the fixed element. In that circumstance though, they noted, it would be essential that the fixed charge be allocated between households in some way reflective of ability to pay.

6.19 To do that, they suggested the use of Council Tax bands, possibly taking into account the exemptions and reductions available for taxpayers. Though such a scheme was said to satisfy the multiple criteria of social justice, environmental sustainability and economic efficiency, it would, of course, require widespread metering as well as monitoring of household composition. It would provoke arguments about needs and be neither simple nor cheap. A variation does without a standing charge but offers a volumetric *rate* of charging linked to CT bands; thus, consumers in lower CT banded properties pay less per cubic metre than their neighbours in more valuable homes.¹³⁰

6.20 Some consumers' views on charging options are explored in section 9 below.

Tariffs

6.21 Consideration of "charging" systems, including hybrids, brings us to the topic of tariffs. As the saying goes, "*the devil is in the detail*" and in our context it is in the tariff with the focus on measured charges; meters raise costs in any event (including, of course, because payment by volume is in arrears) but they are essentially just bits of metal and it is the pricing structures they facilitate which are either their justification or their downfall. Apart from some small-scale experiments, some a long time ago and many of which have some methodological difficulties, most of the work on tariffs done in this country (and hence under UK conditions) has been modelling, i.e. desk-top studies, though they should not be dismissed completely for that. Their results show some similarities and some differences; commonly, though, they are not easy for non-economists/statisticians to unravel.

6.22 A leading authority, Paul Herrington, refers¹³¹ to a number of small scale studies going back to 1970 and resulting in demand reductions of 10-15%; the details are unavailable but they are, of course, now up to 30+ years old and social and other conditions have changed. Pending publication of a delayed study by UKWIR, originally due at the

¹²⁹ *Fair and Sustainable: Paying for Water, What the Government Could Do*, Hills, Huby and Kenway, New Policy Institute, 1997

¹³⁰ See note 125 above

¹³¹ *Waste not, want not*, WWF 2007

beginning of this year, nearly all of the evidence of the impact of different tariff structures on measured consumers comes exclusively from abroad. In his review, he examines a number of “sustainability” tariffs for their distributional effects; the predictions resulting were:

- moving unmeasured households to a standard measured tariff tended to benefit lower income (predominantly pensioner) households but penalised larger ones
- moving unmeasured households to an IBT¹³² gave similar benefits to households in the lowest two income deciles but larger households lost out even more as the free/low cost of the initial block pushed up the price of successive blocks
- moving unmeasured households to non-standard IBTs produced both losers and gainers among the lower income households though the former predominated. The reason suggested was that the group contained a number with abnormally high consumption whether because of medical need or, perhaps, inefficient appliances
- moving to IBTs involving occupancy-related blocks (such as that proposed by the NPI above) from a standard measured tariff was the only scenario which produced generally positive results for all low income households.

6.23 In the end, Herrington comes down on the side of amended IBTs, cautioning nevertheless that the potential advantages for currently unmeasured consumers needs the companies to recognise both the medical needs issue (so far, of course, dealt with only imperfectly by the Vulnerable Groups scheme) and that of high essential water use due to inefficient appliances (WCs, showers etc). In addition, he adds, a limited “passport” tariff (addressing affordability directly to reduce bills without relying on behavioural reactions) may be required for consumers not catered-for by IBTs for some reason.

6.24 Ekins¹³³ quotes a study by the Institute for Fiscal Studies in 1993; on the assumptions made of a standing charge and a flat volumetric rate, consumers in the lowest three income deciles neither gained nor lost on average but the top three were net gainers. Later, given access (as we were for our last report) to Anglian Water’s database, he was able to carry out the first comparison in the UK of household consumption and incomes. It found, among other things, that households in the 80th income percentile used twice as much water as those in the 20th. That would tend to support a taxing approach to water charges but also lends weight to our proposition above that to make major in-roads to consumption, it is necessary to get at better-off consumers. Running a similar set of simulations to those in Herrington’s review, but including one based on “stretched” CT bands, he concluded that on average, poorer households would be better off on meters. In common with previous findings, up to 20% of these - mainly larger households - would, however, be worse off if they did not reduce their consumption despite a “lifeline” of free or cheap water. They could, however, be given some additional, targeted, help.

¹³² Increasing block tariff; also called a rising block tariff

¹³³ *Green taxes and charges*, Ekins & Dresner, Policy Studies Institute for JRF, 2004

6.25 UKWIR (UK Water Industry Research) notes the age of a lot of the existing data and makes a long list of recommendations for up-dated research¹³⁴.

Setting charges

6.26 Individual consumers' charges are set currently by distributing the admissible costs of the undertakers between them according to the profile dictated by the charging base. The process is carried out separately for water and sewerage services, regardless of whether the undertaker is the same or not and the result in each case is expressed partly in a standing charge and partly (usually mainly) in an element related to the property served, most commonly still by reference to its rateable value. It is essentially a cost-recovery system. OFWAT currently sets a single "K" factor for a basket of tariffs. That is to say that so long as a company's price rise remains, overall, below that limit, it is largely free to raise or lower constituent tariffs at will. This is confusing and potentially unfair to consumers; it has allowed the abuse described above in connection with "free" meters which distorts consumer choice. The way to end this (and which would reinforce the principle of cost-reflectivity) is to set a "K" for each tariff.

The rest of the UK

Northern Ireland

6.27 The situation in N Ireland in particular deserves a mention. There, since Victorian times, water services have been paid for out of public funds¹³⁵ and the right to an adequate supply of safe water continues to be regarded as a basic entitlement. The province's infrastructure nevertheless requires renewal and despite a relative abundance of water (only 6% of supplies rely on groundwater abstraction and Lough Neagh alone provides 32% of surface water supplies) and ignoring the fact that as much as 34% of water put into supply leaks out again, demographic changes were predicted to result in a 20% shortfall by 2030. Quality standards too, for both drinking and waste water, are subject to the same upward pressures as they have been in the rest of the UK and in March 2003, Angela Smith¹³⁶ introduced a consultation¹³⁷ which proposed to move Northern Ireland's water and sewerage services onto a "self-financing basis" with the introduction for the first time of separate domestic water charges from 2006.

6.28 Unhappy with the government's process, however, the General Consumer Council for Northern Ireland (the "GCCNI", which has since acquired a statutory consumer representative role) undertook some consumer research. Acknowledging that someone had

¹³⁴ See note 127 above

¹³⁵ Until 1999 from the Regional Rate and its predecessors; since then via a block grant from the NI Assembly, part-funded by the Treasury

¹³⁶ Angela Smith MP, then Parliamentary Under-secretary of State with responsibility for the Department of Regional Development

¹³⁷ *The Reform of Water and Sewerage Services in N Ireland*

to pay for water, when they were asked what the most appropriate method of charging was, 63% agreed that payment according to the amount of water used was best, ahead of 44% favouring a *per capita* charge and 41% who suggested a fixed charge for every household¹³⁸. That proportion subsequently increased to around 70%. Notwithstanding, they wanted meters only on their terms; consumers do not support the privatisation of their water and sewerage services, nor do they believe that water should be bought and sold for profit and they were very unhappy at the consequences of bills reflecting the full costs of future investment and especially that their domestic rates bills would not necessarily be reduced by an equivalent amount. In 1998/9, the average charge for water to domestic rate-payers was £127; the consultation document predicted that any new charge was likely to be in the region of £350-£400 with increases to follow as investment increased. Putting this into context, incomes in N Ireland are substantially below the UK average, there is a greater reliance on benefits and utility prices are higher¹³⁹. Though cautioning that respondents had not been made aware of the full capital costs associated with metering, the GCCNI went on to endorse their choice.

6.29 Underpinning that choice, however, there was a widespread belief that everyone should be able to afford enough water for their daily needs with support for the principle that special allowances should be made not just on health/medical grounds but in particular (with 86% support), and in contrast to the Vulnerable Groups' scheme here, to the elderly (those 65y and above). Without such allowances, almost 50% of households would experience water poverty.

6.30 The government nevertheless ploughed dogmatically ahead, a year later, with a hybrid of a standing charge, reflecting connection costs, and a larger element based on property values as a proxy for ability to pay. Consumers in receipt of housing and rates benefits would receive an automatic 25% discount and a hardship relief scheme was to be established to provide short-term assistance to consumers unable to meet their bills because of exceptional circumstances¹⁴⁰.

6.31 Amidst a growing sense that consumers were having the wool pulled over their eyes by their direct rulers, however, the restoration of the Assembly last year has brought a pause for thought. The belief¹⁴¹ that the proposed new water charge is not fair continues amidst considerable concern that, without changes, increases in bills will lead to increases in financial hardship, poverty and debt. Notwithstanding their apparent preference for measured charges, however, the politicians are less sure, those parties representing poorer constituencies in particular opposing them.

6.32 On 1 April 2007, Northern Ireland Water Service became a Government owned

¹³⁸ *Paying for Water*, GCCNI, May 2003

¹³⁹ Incomes at the time were 19% lower, 9% more of all household income came from benefits and then, NI households paid, on average, 26% more for fuel than the rest of the UK, *Family Spending 2001-2*, ONS

¹⁴⁰ See announcement by the Secretary of State, John Speller MP, 13 September 2004

¹⁴¹ *Water and the Consumer; Driving for a Fair Deal*, GCCNI, June 2007

company called Northern Ireland Water Limited (NIW) and almost immediately, the Northern Ireland Assembly deferred the introduction of domestic charges for water and sewerage services for 2007/08. Ruling out privatisation, in June, Regional Development Minister Conor Murphy established an Independent Water Review Panel to undertake a comprehensive review of how water and sewerage services are provided in Northern Ireland and to make recommendations on the best way to deliver and pay for water and sewerage services in Northern Ireland in the future.

6.33 The Panel released an interim report in October 2007. It looked at the cost of water and sewerage services and how these will be funded. Acknowledging that N Ireland does need to pay more for its water and sewerage services it said this should not start until April 2009, i.e. with a phased approach. The report also recommended that:

- the previous plans for water charges should be abandoned;
- there should be no separate bill for water and sewerage charges
- current plans for domestic metering should be stopped
- future payments should be based on property capital values, and
- there should be more help for those who cannot afford to pay to prevent water poverty

6.34 Reconsidering its position, the Consumer Council gave its full support to the Independent Water Review Panel's first report, believing it was the best, most practical starting point for getting the right deal for all consumers, particularly those on low incomes. Chairman, Steve Costello, said *"Any future metering proposal will have to beat the offer on the table today in terms of fairness and affordability."*

6.35 The Panel's "Strand 2" report on the management, governance and delivery of water and sewerage services was published at the turn of the year. Recommending that consumer representatives should have equivalent status to the regulator¹⁴², that consideration should be given to replacing NIW with a "customer company" obliged to re-invest profits in lower bills and service improvements and that all vulnerable households should be entitled to a concessionary tariff, extended beyond its present 2010 limit, their aim, the Panel said, was to obtain the lowest possible charges for the people of N Ireland. Current notional average combined domestic bills in the province are £358 eight percent above England and Wales but still well below the highest regional bill there of £497 (in the south west)¹⁴³.

6.36 Immediately criticised by the Regulator for, among other things, giving undue weight to the vulnerable and conflating the notions of consumer and tax-payer but above all, for its continued commitment to a capital value based tariff scheme, the NIAUR announced that it was moving ahead regardless with work on options to implement a universal metering

¹⁴² ie the Northern Ireland Authority for Utility Regulation, ("Ofreg") established on 1 April 2007

¹⁴³ *The Utility Regulator's Report on Northern Ireland Water Scheme of Charges 2008-2009*, NIAUR, September 2008

scheme¹⁴⁴. In the meantime, though, and against a background of controversy over NIW's strategic business plan¹⁴⁵, the will of the people still holds sway and domestic consumers will not receive bills directly from NIW until at least next April. Even then, they will be based on capital values, those, subject to political decisions still to come, likely to be capped (as domestic rates are) and to include significant concessions to widely-defined vulnerable households paid for in part by some £200m rumoured to have been wrung out of the Prime Minister as the price of Unionist support for his Counter-Terrorism Bill in June¹⁴⁶.

Scotland

6.37 In contrast again to England and Wales, Scotland also recognises social considerations in its arrangements for water supply. There too, they sit alongside environmental and economic concerns and "harmonised" charges¹⁴⁷ are based on Council Tax bands. Perhaps not ideal, because both of the degree of cross-subsidy and the concentration of property in the lowest two tax bands, the result is nevertheless a distribution of costs slightly more progressive than England's.

6.38 In another significant difference, Scotland's Water Commissioner – their equivalent of Ofwat - is *obliged* to comply with Ministers' Directions on his functions. This year, the average unmeasured household combined bill in Scotland is £310, six percent lower than its equivalent in England and Wales.

¹⁴⁴ Letter from Iain Osborne, CEO NIAUR, to Conor Murphy MLA, Minister for Regional Development, 25 January 2008

¹⁴⁵ *Action needed to stop water bills soaring*, Press release by GCCNI, 23 April 2008

¹⁴⁶ *Gordon Brown buys time with deals on terror vote*, the Times, 12 June 2008

¹⁴⁷ A nationally averaged rate for the domestic sector, balancing out the low relative costs of supplying the lowland cities with the higher costs of supplying smaller highland communities.

Water charging: a submission to the independent Review of Household Water Charging and Metering for Water and Sewerage Services

7 The particular problem with meters

We drew some contrasts between the energy and water sectors in section 5 but another lies, of course, in the prevalence of measured charging in each. There is no reason why the latter should follow the former in this respect nevertheless, the spectre of water meters has been with us and growing for some years. At the time of our last paper, however, only around 15% of households had them, up from c.7% in 1995, but in that paper, we described how, in a reversal of Labour's policy in opposition¹⁴⁸ and under Michael Meacher's "green" influence the 1999 Water Industry Act brought about "creeping compulsory metering"¹⁴⁹. While continuing to deny that universal metering was their aim¹⁵⁰, successive Ministers have since signally failed to provide a modern basis for unmeasured charges and maintained the incentives for consumers to switch to meters.

7.1 Spurred by claims based on the "pay only for what you get" argument, the apparently free nature of optional meters and what might be thought some blatant tariff-rigging¹⁵¹, a wilfully tilted playing field has seen meter penetration now pass 30% nationally and reach much higher proportions in some regions¹⁵², notably the Anglian and South West Water regions. Completing the "commodification" of water begun by the Conservatives' privatisation in 1989, the penetration rate is accelerating, partly due to new house-building, partly to government encouragement. Claimed to be the fairest system of charging, we looked at what fairness means in the last section with the suggestion that metering is, in fact, inherently *unfair*.

7.2 Another aspect of fairness - whether metered consumers are getting value for money - is also debateable; in a reverse of the structure of domestic bills (though at the same time the justification for large user discounts), only c.15% on average of the cost of water services is actually related to volume supplied, the remainder being related to the provision and maintenance of fixed assets¹⁵³. Something which is not debateable though is that meters are certainly not free; not charged-for at the point of installation, the costs of meters nonetheless fall back on all bills and the capital cost of near-universal installation was estimated a decade ago at c.£4 billion. Replacing worn-out meters costs more, then there are the additional revenue costs of calibration, reading, billing and dispute resolution, not to forget (in further confirmation of their inequity) the effects of tariff rebalancing¹⁵⁴.

7.3 "Smarter" meters may reduce reading costs but are likely to be more expensive in the first place; smart meters being developed now for gas and electricity cost c.10 times more than conventional ones. Limited experience from the energy field suggests, moreover,

¹⁴⁸ See, for example, *Environment update no.10*, July 1995 and *Ending the waste*, Nov 1996, the Labour Party

¹⁴⁹ First coined by the National Consumer Council

¹⁵⁰ See, e.g. Environment Minister Ian Pearson, Defra Press release 284/06

¹⁵¹ Some companies appear to have been increasing the charges to low-RV houses to make metering appear more attractive, see MD 165, Ofwat, September 2000

¹⁵² Meter penetration currently varies between c.7% and 66% in different regions, see *Future Water*, Defra 2008

¹⁵³ *Towards a sustainable water charging policy*, NCC, 2002, pp5,13

¹⁵⁴ Described by Vass P in *Water charging and social justice*, New Policy Institute, 2000

that consumer access to information on current consumption actually does little to affect it. Not surprisingly, industry leaders describe measured charging as the most complicated and costly system that could possibly be devised. In the past, they have petitioned government against it¹⁵⁵. Water UK still says it is not the right approach for those who struggle with water charges¹⁵⁶.

7.4 As significant as they are, however – up to £70 per domestic consumer per year¹⁵⁷ - the additional operational costs of meters are no longer the only concern. Much as they might inflate bills unnecessarily, we believe a greater danger is yet to arise from the changed purpose of meters¹⁵⁸. Once just a replacement means of allocating charges - according to volume consumed - as rateable values became more obsolete, in a conflation of policies the threat of climate change is now being used preferentially to argue for metering as a tool of necessary conservation. More precisely, of course, it is an argument for price-rationing, more a product of tariffs than meters themselves but which are nonetheless their basis, with the same inherent drawbacks. The key danger we foresee of this new paradigm is that it will lead to greater water poverty - indeed it exploits inability to pay - at the same time (as we warned in our last paper), hidden and more insidious.

7.5 Put simply, when measured and unmeasured charges are roughly in balance, as they are today, there may be an *opportunity* for the bulk of “average” households (that is with average/above average income and proportionate consumption) to save a little money through conservation but there is no real *incentive* to do so. The reason is that for most, fortunately, water bills are still relatively affordable; as the NCC commented¹⁵⁹ “...many consumers don't really notice the size of the water bill.”, a view reflected again more recently as “Most...felt...their current water bill...was not worth worrying about...”¹⁶⁰. At somewhat less than 2% of average weekly income, they would have to change their behaviour radically to save a significant amount of money and the trade-off in terms of quality of life just is not worth it. The potential savings are even less of a lure to better-off households (such as that in Illustration 5 on page 20 above). We know this from at least one of the water metering trials of the 1990s¹⁶¹, from later research by the Consumer Association (now Which?)¹⁶², and from more recent observations among “switchers”, some of whom also *increase* their consumption subsequently¹⁶³, indeed, there is an implication inherent in metering that if a consumer can afford to pay, he is entitled to as much as he wants.

¹⁵⁵ Letter from WSA/WCA to Secretary of State for the Environment, 30 Sept. 1994.

¹⁵⁶ *Debt, charging and social impacts*, note 1 above

¹⁵⁷ *Water and sewerage charges 2007-08 report*, Ofwat, May 2007

¹⁵⁸ Acknowledged in *Future strategy for charges etc – supporting information*, Ofwat, 2007

¹⁵⁹ *Towards a sustainable water charging policy*, National Consumer Council, 2002

¹⁶⁰ *Deliberative research into consumer views on fair charging for the Consumer Council for Water*, Corr Willbourn Research, 2007, para 1.1.3

¹⁶¹ Consumption in the Bristol trial area had increased by 3.9% by year 3

¹⁶² Forty-five percent of metered households take no steps to conserve water, *Water consumption and charges*, Consumer Association

¹⁶³ *Per Severn Trent Water*, in a personal communication from John Thackray

7.6 For the minority already in water poverty and under a cost pressure, however, logic suggests things are different. For them, meters offer both an opportunity *and* an incentive to which they might be expected to react, as those households in Save the Children’s study¹⁶⁴ did, in an economically rational way. And if savings in consumption are being made through behavioural change¹⁶⁵ among metered households currently, we suggest it is likely to be predominantly from this group, indeed as we have seen, meters are being actively promoted to them as a means of containing bills¹⁶⁶. That is a concern since we can no longer judge the depth of their deprivation simply by comparing their disposable income and the size of their bills as is explained in Section 2. The illustrative examples given above demonstrate the often regressive nature of water charging and the potentially damaging effects of metering for households with above-average essential needs for water but they cannot show how poor households now modify their demand according to their budgets.

7.7 But surprisingly perhaps, even now, the evidence for the conservation effects of measured charging *per se* is equivocal. We have written above (section 2) about the adverse social effects of metering revealed by the National Metering Trials. They are frequently held out as proof of the ability of a variety of tariffs to deter consumption but closer examination has exposed cracks in this argument. In the first place, in most of the trial areas, the initial shock of metering being overcome, consumption rose again, contradicting recent claims that no trials have ever exhibited “bounce-back” - the propensity of consumers to revert to previous patterns of consumption.

Table 10: National metering trials: changes in consumption years 1 and 3 by trial area

Trial area	Change in consumption year 1 /%	Change in consumption year 3 /%	Trial area	Change in consumption year 1 /%	Change in consumption year 3 /%
Bristol	+2.4	+3.9	Three Valleys #2	-13.8	-5.3
E Worcs	-19.7	-17.6	Southern	-11.3	-13.9
Three Valleys #1	-8.8	-8.4	Thames	-12.4	-10.0
Mid Southern	+2.3	-9.6	Wessex #1	-9.0	-12.1
N’umbria	-16.3	-16.1	Wessex #2	-19.3	-6.3

Source: National Metering Trials Final Report

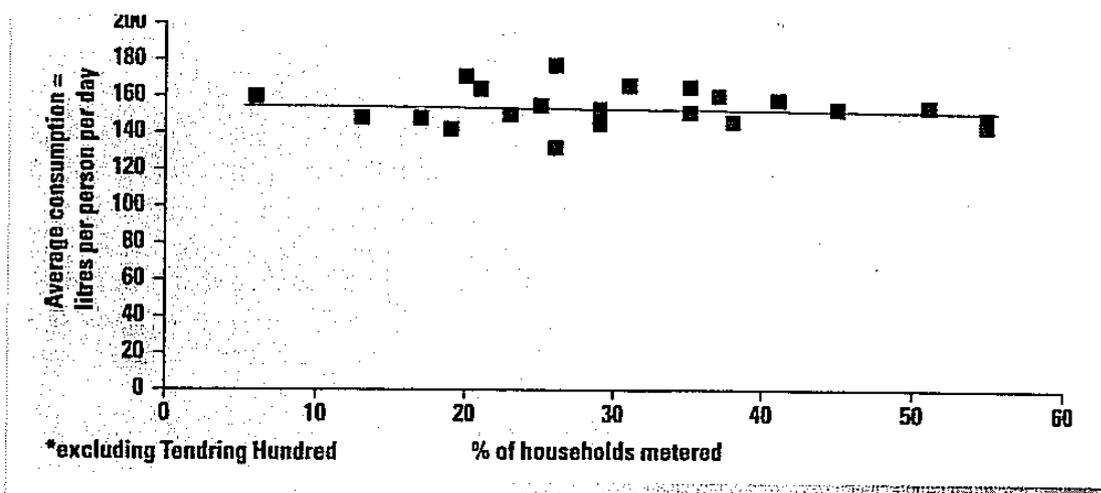
¹⁶⁴ See section 2 above

¹⁶⁵ As opposed to the other source of savings, namely the identification of leakage

¹⁶⁶ *Cross government review of affordability*, note 84 above

7.8 Overall, the trials are credited with an 11% reduction (excluding leakage reduction) but, more recently, an UKWIR-funded study has had to reassess this claim. Both previously and since, the undertakers have been collecting data on demographics, consumption and metering. Based on this, and against an underlying growth in population of c.8%, it appears that the volume of water put into supply in 2005 was no more than that in 1980, notwithstanding the introduction of the free meter option in 1999 and the increase in metering generally. Indeed, a plot of household consumption against meter penetration across 21 companies shows only a modest decrease in *per capita* consumption which, extrapolated to a situation of 100% metering, would suggest only a c.7% reduction.

Fig 1: Household consumption v meter penetration.



Source: Utility Week

7.9 This would tend to confirm our suggestion in the last section that only a minority of the population, the poor or the very “green”, will respond to meters without the added encouragement of conservation tariffs.

7.10 Looking at individual companies, there is no consistent picture but in 10 out of 13 examined, water use appeared to increase. When, similarly, it comes to examining effects on peak demands, experimental flaws only reinforce doubts about industry conclusions; longitudinal studies suffer because of confounders such as changing weather and cohort studies are over-dependent on estimates of the comparability of unmeasured consumption¹⁶⁷.

Metering purposefully for conservation

7.11 If the effect of what might be called “casual” metering is uncertain, it is interesting to ponder whether metering purposefully to encourage conservation does not bring a further

¹⁶⁷ *Does Metering Measure Up?*, Archibald G, Utility Week, Jan 26 2007

dilemma though, and it is this: while only a minority of people have an incentive to reduce consumption when a meter is plumbed into their supply pipe, this cannot bring about the required scale of savings. Even leaving aside how much saving that alone actually results in (which we question in the next section), it is a matter of maths – the 20% or so of households in relative poverty cannot do all the saving for the rest and if the target of a 10-15% reduction in overall demand is to be met, the better-off majority have to be persuaded to save water too. That is particularly so since they consume proportionately more water¹⁶⁸. The logic is, we suggest, that once enough of them have been seduced by meters, or been forced to accept them in “water stress areas” or, increasingly, when they move home, prices must rise to the point where *most* of us are dissuaded from consuming what we do today. Part of that price rise will result from the investment needs discussed above; at least where prices remain relatively low, however, it also suggests the need to add a “conservation premium”, indeed Defra now admits as much¹⁶⁹.

7.12 Headlined by The Times as “Price rises to force cuts in water use”¹⁷⁰, the still unanswered question is how high will they need to go? Water is an “essential good”; we all need it daily and it has no real substitute. Normative economics suggest that demand is relatively inelastic¹⁷¹, that is, we will pay a high price to keep it and recent consumer research tends to confirm that¹⁷². Put another way, it will take a higher price still, moreover adjusted regularly to keep pace with rising incomes, to choke-off demand at current levels, and more still to accommodate the additional demand from population growth without developing new resources. It has to be asked whether that is either practically or politically realistic. Some consumer views are noted in section 10 but the fuel price escalator of the late ‘90s provides an insight; taxes on petrol and diesel were raised year-on-year above the rate of inflation with the intention to deter consumption on environmental grounds. Besides benefiting the Treasury however, the principal result was public demonstrations and the policy failed. The price of road fuel remains high but so does its consumption. In water’s case, though Ofwat seems only just to have realised it¹⁷³, it will be the water companies which are likely to benefit from the growing revenues.

7.13 And as this prediction takes effect, what of the inevitably growing population of households facing water poverty as prices rise? Metering’s proponents, in particular a number of environmental/wildlife organisations¹⁷⁴, claim while championing their special interests that a suitable tariff structure (in particular a “rising block” tariff structure) is all that is required to keep their taps open while safeguarding public health. Though the

¹⁶⁸ *Green Taxes and Charges*, note 133 above

¹⁶⁹ See *Future Water* Ch8, para 19

¹⁷⁰ 5 October 2008

¹⁷¹ Estimated in EU countries between -0.1 and -0.24, Massarutto & Berbeka, EC Sintra Conference, 1999, i.e. a 1% real increase in charges would result in a decrease in consumption of only 0.1%

¹⁷² “[Water’s] value was seen as so high and so fundamental that it couldn’t be reduced to a monetary value.” Corr Wilbourne Research for CCWater, para 1.1.7

¹⁷³ Ofwat proposes, from 2010, to claw-back unpredicted revenue from the companies, reducing the likelihood of under-statement (leading to over-generous settlements) in their business plans, see RD 14/07, Ofwat

¹⁷⁴ For example the WWF and the RSPB, see e.g. *Blueprint for Water, 10 steps to sustainable water by 2015*, 2006

question arises whether subsidising consumption in this way is not simply perverse when, overall, the object is to encourage conservation, there is, as the last section described, little or no empirical evidence yet to demonstrate how these might operate in practice¹⁷⁵.

7.14 The idea raises many other questions too, leaving aside its application to sewerage charges: first there is the decision to be taken as to what volume should be protected in an “essential” block and it is easy to foresee some arguing for only a subsistence amount¹⁷⁶. Should it be free? Should it be just at a reduced price and if so, what proportion of the “full” price? Should either/both the price or volume vary according to the supply-demand balance regionally or even locally? Should they vary seasonally? Should the volume vary according to household size and composition, would householders put up with the intrusion that implies and who would check on them? Would variations in tariff structures between regions – potentially between neighbours – be equitable? And in any event, given our relatively modest average levels of consumption, what does maintaining the affordability of any minimum volume mean for the price of excess volumes from which all the saving will have to come at a high marginal rate?

7.15 Opinions are split: some see IBT’s as the solution while other prevailing opinion, including from within the industry, is that they are fraught with difficulty.

7.16 These questions raise serious concerns about affordability, particularly for the many households with above-average essential need for water because of household size or the medical conditions we refer to in section 3 yet, so complacent has the government been that even in its latest water strategy¹⁷⁷, setting out priorities for the future, affordability does not find a substantive mention until page 77.

¹⁷⁵ The first large-scale experiment with a rising block tariff among non-volunteers started in the Folkestone & Dover area in April 2008 after compulsory metering was introduced in the area last year.

¹⁷⁶ The WWF talks of a “basic” supply, *Waste not, want not*, 2007. Herrington, in 1996, suggested 60L per person per day; under a scheme in Flanders, it is just 40L – half a shower

¹⁷⁷ *Future Water*, Defra, 2008

8 Sustainability

Part of the justification now for advancing metering is that it is necessary for sustainability. So, this argument runs, large parts of the UK are as arid as the Mediterranean, we are all wasteful with our water, consumption is rising inexorably, and sending price signals to every household is the only way to save the planet. It is a serious issue but, arguably, the case rests on some misrepresentations.

8.1 Since the Water Act 2003, Ofwat's statutory duties have included one to contribute to the achievement of sustainable development. Its sustainable development action plan states that the guiding principles of sustainable development will inform its approach to the next periodic review, and that it would conduct further consultation on what this will mean. Part of this work has included looking at the interaction of incentives around water company revenues and water efficiency. Ofwat has also said that it will carry out work to develop an understanding of the implications for choices about future investments.

The three pillars

8.2 There are many definitions of sustainability (as well as semantic arguments about the appropriateness of the word), the most familiar probably being *"Development that meets the needs of the present without compromising the ability of future generations to meet their own needs"*¹⁷⁸. All encapsulate in one way or another the interplay of society, the environment and economics in concerns about the future, i.e. how to live our lives, indeed to improve our lives, without, as it has been put, "costing the earth". What both that interplay and that goal imply, however, are not "trade-offs" between one sector and another but that for development to be truly sustainable, all three should be reconciled.

8.3 Waterwise agrees; at a government water strategy roundtable in March 2007, its Director said: *"it is misleading to talk about striking a balance between the environment, economic cost and water charges - we need to start looking at ways of doing things with benefits in all these areas."*¹⁷⁹ Mirroring that, Oxford utilities economist Dieter Helm has said¹⁸⁰ that the emphasis on value for money of the regulatory model established in the 1980's is no longer appropriate and that each of the elements of regulation, including social policy and environmental protection, should stand on an equal footing. Underlining the importance of the former nonetheless (and with inspired ambiguity), the 1992 Rio Declaration said that man is at the centre of our concern for the environment.

8.4 The emphasis in this context, nevertheless, is usually on the environment. That is as true in government as among most (and the loudest) of the non-governmental organisations. Speaking at this year's Labour Party conference, environment secretary

¹⁷⁸ The "Brundtland" definition, deriving from the 1987 UN World Commission on Environment and Development

¹⁷⁹ Jacob Tompkins, 14 March 2007. Waterwise was established by Water UK in 2005

¹⁸⁰ *The new regulatory agenda*, Helm D, Social Market Foundation, 2004 (reported in Fitch, note 122)

Hilary Benn said *"The more water we use, the less there is for the countryside and wildlife."* These environmental concerns centre on the supply-demand balance and the uncertainties of climate change.

Environment

8.5 Though there remains much uncertainty around it, expert knowledge rarely equating to forecast accuracy, the scientific consensus is that climate change is real and is predicted to have significant effects on our weather patterns. There is nonetheless no evidence to link more recent variations in rainfall to it nor, indeed, yet to say whether the UK is becoming wetter, drier or exhibiting anything other than normal climatic variations. Thus, an examination by the Environment Agency of rainfall patterns in southern England during 2004 and 2005 showed little deviation from the 1961-1990 norm despite some monthly rainfalls over 75% higher¹⁸¹.

8.6 Subsequently, one relatively dry winter was followed by another, in 2006, and no news bulletin was complete without an item on the drought. Mayor of London Ken Livingstone pleaded hysterically "Save water; don't flush"¹⁸², hosepipe bans were introduced, drought orders applied-for and companies encouraged to apply for "scarcity status", enabling them to meter compulsorily, yet a later study by the Centre for Ecology and Hydrology¹⁸³ suggested that the drought of 2004-6 was by no means exceptional, matching many historical examples and that, rather, the weather of the previous 50 years had been unusually kind. Though, wetter interludes forgotten or dismissed as "the wrong sort of rain", water minister Elliot Morley said at the time: *"It would be irresponsible of any government to think that we have had a heatwave and a dry winter, and that these are one-off events"*¹⁸⁴, the Met Office took a cooler-headed view, saying that it was not possible to say whether the current events were caused by climate change¹⁸⁵ and by mid 2007 the news headlines read instead *"Where has the UK's summer gone?"*¹⁸⁶ with record (since 1914 anyway) rainfall in June and large parts of the country under water.

8.7 Two thousand and eight began similarly wet, England and Wales overall receiving 160% of the long-term average January rainfall with groundwater levels nearly everywhere normal or higher for the time of year and reservoir storage standing at between 88% and 99% of capacity¹⁸⁷. In fact, across England and Wales there is more than enough rainfall to meet the demand for water; less than 20% of annual rainfall is actually abstracted for all purposes¹⁸⁸, we could make more use of aquifer-recharge and increase the re-use of

¹⁸¹ *Demand Management Bulletin 73*, Environment Agency, October 2005

¹⁸² Reported in *The Times*, 29 June 2005

¹⁸³ Marsh et al in *Weather*, April 2007

¹⁸⁴ Reported in the *Observer*, July 3 2005

¹⁸⁵ Met Office Press Release, 5 July 2007

¹⁸⁶ At www.bbc.co.uk/news, 4 July 2007

¹⁸⁷ *Water situation report*, Environment Agency, January 2008

¹⁸⁸ Roughly speaking, half goes to the domestic sector with the remainder accounted for equally between industry/agriculture and leakage

effluents, there could be greater inter-connectivity between companies' networks and desalination is an option *in extremis*¹⁸⁹. Even if we take a pessimistic view of climate change, it seems to be the collection, storage and distribution of water that are the problem¹⁹⁰. As a nation, we seem to suffer from poor planning in so many areas – roads and railways are prominent examples – and similarly, the water shortages in Yorkshire in 1996 were recognised as failures of the infrastructure¹⁹¹ (and, incidentally, of regulation) allowing the promise to be given “never again”. Of the shortages in 2005, Tony Juniper, director of Friends of the Earth said: “*This situation emerges with depressing regularity, where you find insufficient capacity to meet people’s needs because there’s been a minor fluctuation in rain.*”¹⁹² At the time of writing this, no fewer than 25 flood warnings are in place across England¹⁹³.

8.8 Notwithstanding, Ofwat has assumed that water scarcity status will be achieved for most companies in the south east during the next price control period. This is based on water scarcity status being achieved by eight companies in the south east of England over the period, with 90% meter penetration in these companies' areas by 2025. The expectation is that the resulting large increases in selective metering will not have a significant impact on revenues, according to the paper. This is based on the assumption that reductions in demand will be matched by higher charges.

8.9 The Environment Agency is advocating a strategy that supports full metering in water stressed areas, together with “...*more imaginative tariffs so that the value of water is better reflected through price signals in bills, without an overall increase in the cost of water to customers*”.¹⁹⁴ Clearly, this too is predicated on consumption going down in response to higher charges. It is planning to do further work on metering, which will also look at the affordability of metering particularly for low income and vulnerable groups. So far it has not addressed the issue of metering and affordability, including how people with higher than average essential use of water can be protected.

Society

8.10 The questions here are about demography or waste; which is buoying up consumption? How many of us use how much, and on what? And is that unreasonable? Long-term forecasts of demand have proved unreliable in the past and evidence to support the proposition that increasing affluence will lead inexorably to rising demand is thin; the parallel sometimes drawn with electricity is poor – households may continue to gather more,

¹⁸⁹ Thames Water achieved planning permission in June 2007 for a plant to be built at Beckton supplying 140,000m³/day to a million consumers in north east London. Six other water companies are said to have plans for plants, ENDS Report 390, July 2007

¹⁹⁰ *Towards a sustainable water charging policy*, National Consumer Council, 2002

¹⁹¹ See *Water Supply in Yorkshire* (the 'Uff Report') Uff J, Yorkshire Water Services, 1996

¹⁹² See note 184 above

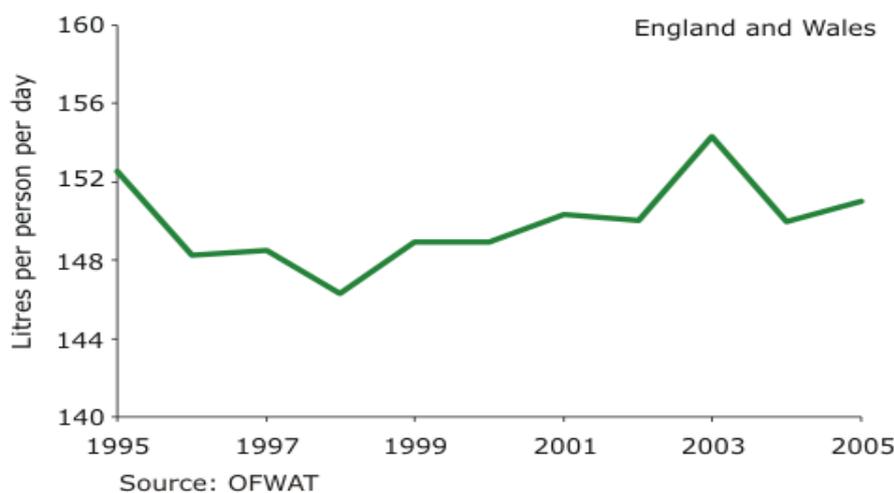
¹⁹³ www.environment-agency.gov.uk

¹⁹⁴ *Water for People and the Environment: Developing Our Water Resources Strategy for England and Wales*, Environment Agency, 2007

and more power-hungry, electrical appliances but they need (and usually have space for) only one washing machine (and 95% of households have one already). By international comparisons, we do not, generally, use a great deal of water. That we may have less rainfall per head than some Mediterranean countries makes good headlines but is irrelevant when we use only a small proportion of it and *per capita* consumption here remains in the middle of the European range, below that of many EU countries including Spain, France and Sweden and on a par with Finland, all metered¹⁹⁵. Consumption here pales into insignificance compared to the US. In countries which have achieved consumption reductions in recent years, Germany and Denmark for example, it has been through better education and the introduction of more efficient appliances.

8.11 According to Ofwat, our average domestic consumption per person per day is around 151 litres and despite fluctuations which it says are largely attributable to summer weather, contrary to the received wisdom (and the prediction of the Environment Agency) consumption has not changed significantly for over a decade¹⁹⁶.

Fig 2: Domestic consumption, 1995-2005



The charity Age Concern defends this, saying “...*there is no evidence that UK households are particularly profligate in their use of water.*”¹⁹⁷

8.12 The CIEH has made the same point to Defra, arguing that increases in consumption in the latter years of the last century were due in part to housing improvements. It is often forgotten that the local authority-run improvement programmes of the last 30 years or so saw bathrooms installed in hundreds of thousands of older houses for the first time. It is surely not now unreasonable to use them and the suggestion that as a nation we are at best careless in our water use is generally unfounded.

¹⁹⁵ *International comparison of water and sewerage services – 2007 report*, Ofwat

¹⁹⁶ Source: Ofwat, reported at www.sustainable-development.gov.uk/progress/national/16.htm and reiterated by the Director-general in evidence to the Lords Select Committee on Regulators, 20 February 2007

¹⁹⁷ In its response to Defra's consultation on *Water metering in areas of serious water stress*, April 2007

8.13 Gardeners in particular may have been unfairly blamed; while in some areas agricultural use has highlighted distribution problems, the facts that over a quarter of households now live in flats, mostly without gardens, that the typical English garden is small and that watering gardens is hardly a novel practice make the claim that this use now suddenly threatens the sustainability of supplies difficult to credit. The water companies' own figures, showing all external uses to account for no more than 7% of all water delivered (though there is much variation in these estimates), underline those doubts but it is important to distinguish between individual profligacy and broader demographic pressures as the non-climatic threats to the demand-supply balance since they point to very different solutions.

Low discretionary use

8.14 Crucially, we do not believe that there is much difference in this country between current average consumption levels and reasonable needs when, for example, an average bath takes c.80 litres and flushing the typical lavatory just once takes up to 13 litres more; that is to say the "discretionary gap" in the average household's annual consumption is actually quite modest. We do not claim that all consumers are perfect but the impact of, for example, people with swimming pools is insignificant. The NCC agrees: "...domestic consumers must take their responsibilities seriously...But the evidence that they do not do so is thin." ¹⁹⁸ This is to say that there is actually very little saving to be had without cutting into reasonable, non-discretionary uses. It also means that, as we suggested in the last section, if those are "red-lined" – protected in full - under any measured tariff structure, that a high marginal rate of saving will be required from the remainder with the consequences for prices we discussed.

8.15 By contrast with this discretionary use, on average, something like 149 litres per property per day, roughly equivalent to the principal occupant's consumption, leaks out of the companies' mains¹⁹⁹ - rates they seek to justify in part by claims for the diseconomy of repairs which it is not clear include full consideration of the externalities. Reducing this has been the most cost-effective method of conserving water so far, estimated to save as much as 18.5% of input (2.5 times the estimate attributed to compulsory universal metering)²⁰⁰, and it is rightly where the government and Ofwat have focussed attention though, arguably, more is required.

Demographic pressures

8.16 On the other hand, whereas our population grew by only c.6m in the last 40 years, that rate of growth is expected to double in the next 40. According to the ONS²⁰¹, the population of the UK is expected to increase by about 4.4m, to c.65m, by 2016, to c.70m by

¹⁹⁸ *Towards a sustainable water charging policy*, NCC 2002

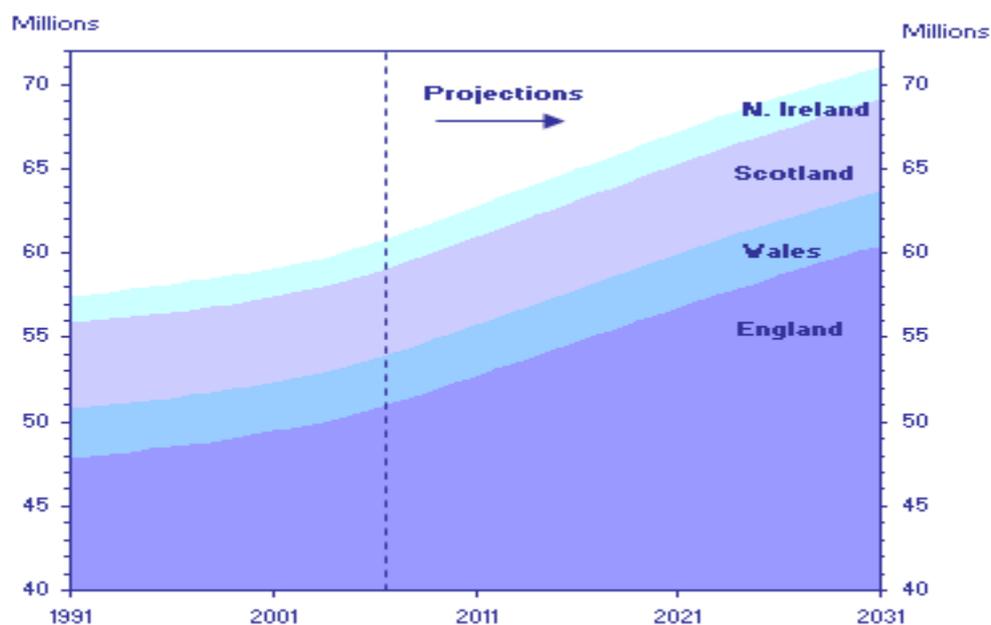
¹⁹⁹ *Water and Regulation; Facts and Figures*, Ofwat 2007

²⁰⁰ See Ekins, p16, note 133 above

²⁰¹ *2006-based national population projections*, ONS, at www.statistics.gov.uk

2028 and to c.71m by 2031. The EU's statistical office, Eurostat, predicts that the UK population will peak at almost 77m, the largest of any EU state, in 2060. Seventy percent of that increase will come from net migration, the remainder mainly from increasing longevity such that by 2031, the proportion of people aged 65y and over will reach 22 percent. Last year, for the first time and despite a prevailing high birth rate, the number of over-65s exceeded the number of under-18s and by 2060, those over 80y are expected to comprise 9% of the total, double their proportion today. All of these people will need water, in their homes, not to forget their schools, businesses etc and overall consumption is expected to rise accordingly.

Fig 3: Actual and projected UK population



Source: ONS

8.17 The bulk of this population increase will be in England and the government plans to provide an additional 3 million new homes nationwide by 2020, including in a number of “growth areas” and “new growth points” predominantly, though not exclusively, in the south east. If these plans come to fruition, they will contribute around 100,000 new dwellings in these areas alone by 2016, an increase of around 32% on previous plans²⁰².

²⁰² www.communities.gov.uk/housing/housingsupply/growthareas/

accommodate that growth through squeezing consumption or if there is no alternative to expanding supply? In fact, whereas the water companies have constructed only 12 raw water storage reservoirs throughout the country since privatisation, Ofwat's last price round began to make provision for the construction of four more and the extension of two existing ones.

Economic concerns

8.21 Why this was not accelerated, staving-off metering and knowing that the process of building a reservoir can take 20 years or more, is because of the economics. The NCC notes it has been calculated that it is two to four times cheaper to save water rather than to build a completely new water source²⁰⁷ though that would not rule out the economy of taking lesser measures of course. Ekins²⁰⁸, quoting a study for UKWIR, however, puts the cost of reservoir construction on a par with widespread metering, ascribing the preference to date to environmental arguments. It is very hard to unbundle estimates like these and it is true that taking land for reservoirs has an environmental cost (though it can yield environmental value too) yet to an extent all this is to play with statistics; more expensive or not, at least those paying the bills get their water in return.

8.22 A similar situation arises in relation to leakage wherein the concept of an economic level of leakage has arisen beyond which the companies say it is cheaper to develop new resources. As we see, however, encouraged by the government²⁰⁹, they generally prefer to restrict demand rather than do that and it is not clear that the costs of that to consumers are factored-in first; if they were, the economic level of leakage would be lower yet here again, money spent on meters seems only to demand more money spent on subsidies and, overall, we all end up with less water per head than we started with.

8.23 Whereas the economic goal of water development might be thought to be to reach a point where all our needs are met at a price we can all afford, we seem to be a long way from that.

Reducing consumption sustainably

8.24 In its 2003 report²¹⁰, the EFRA Select Committee wrote: *"...[W]hile the requirements for environmental improvements are likely to keep increasing, customers' willingness and ability to pay ever larger bills are not. Ofwat, the water companies, the regulators and Government must begin to seek other ways of addressing some environmental problems."* Friends of the Earth too has cautioned against over-reliance on metering, arguing that

²⁰⁷ *Towards a sustainable water charging policy*, NCC, 2002

²⁰⁸ *Green taxes and charges*, Ekins & Dresner, Policy Studies Institute for JRF, 2004

²⁰⁹ As recently as this June, water minister Phil Woolas wrote in answer to a Parliamentary Question "New resources should be developed only where the scope for managing demand is clearly insufficient or unjustified in terms of cost." Answer to Oliver Heald MP, 13 June 2008

²¹⁰ Note 81 above

because it does not guarantee savings, it should be accompanied by investment in other water conservation measures²¹¹.

8.25 Even if deliberately pricing households out of the market for water met any definition of sustainability we recognised, the price mechanism does not provide the only means of reconciling supply and demand and it is not necessary to look far to find an alternative in the energy industry. There, where competition has operated to keep prices down, energy suppliers are formally tasked with helping consumers to reduce their need for their products.

Focussing on need, not demand

8.26 We see no practical alternative, despite the environmental cost, to some development of new resources but the only truly sustainable way, notwithstanding, to reduce domestic water consumption without jeopardising well-being is to concentrate on minimising *need* rather than crudely driving down *demand*. It was with this in mind that the Chartered Institute fifteen years ago, in 1993, first raised the idea of a Water Saving Trust with a purpose analogous to that of the existing Energy Saving Trust. The idea was endorsed by the Commons Environment Committee in its report on Water Conservation and Supply in 1996. The government has repeatedly rejected the idea however, despite a favourable feasibility study²¹² by the Environment Agency in 2005 and more recent support by the Royal Commission on Environmental Pollution²¹³. Though it now, at last, seems to be relenting to the extent of adding from next year a water remit to that of the Energy Saving Trust²¹⁴, that will be restricted initially to three urban pilots and its rationale remains energy saving. The reasons for the government's opposition have never been clear and valuable time is still being lost.

8.27 One obvious function of a Water Saving Trust could be to stimulate a programme of appliance replacement such as has been commonplace in the United States and elsewhere.

Appliance replacement in New York

Between 1988 and 1998, for example, New York moved from a system of unmeasured charging to a system of measured charging. The change was accompanied by a programme to audit water use, to cap bills and to replace toilets with low-flush models. A rebate of £160 for the first toilet and £100 for others was implemented, resulting in a million toilets being replaced. Low flow showerheads and tap aerators were fitted at the same time. Building owners were responsible for buying and fitting new apparatus but the housing authority replaced all the toilets in public housing.

Source: NCC

²¹¹ Reported in Fitch, note 122

²¹² *Water Saving Trust Feasibility Study*, ERM for the Environment Agency, Feb 2005

²¹³ In its 26th report, *The Urban Environment*, March 2007

²¹⁴ As part of its "Green Homes Service"

8.28 The CIEH examined this approach as long ago as 1995²¹⁵; that suggested such an initiative could yield at least equivalent savings to a metering programme, more durably and at no greater cost while not affecting patterns of usage. That in particular is the key to maintaining hygiene; people can go on doing what they did before – they simply use less water doing it. Waterwise's recent *Evidence Base for Large Scale Water Efficiency in Homes*²¹⁶ confirms our findings and the report of last year's Calcutt review²¹⁷ notes that such passive solutions are the most effective. Such a "fit and forget" approach ought to be more popular too. It would also have benefits to the appliance-manufacturing and plumbing sectors, but to argue, as some have done, that the country must be metered first seems economically doubtful - it simply doubles the cost of every drop of water saved.

8.29 A way of financing such schemes must be found and the obvious choice is by the companies themselves; if, through encouraging lower water use they can avoid metering, it would not seem unreasonable for them to put up an equivalent amount of money (or, actually, slightly less, to give them the incentive both to participate at all but in particular, to abandon metering). Precedents for this exist in Los Angeles, New York (above) and in Boston. In fact, the water companies' savings would be greater because, were they to abandon metering, they would not have the high on-costs of that either. Since consumers would be making a considerable saving on the alternative of premium-priced, metered water it is difficult to argue that they should make no contribution at all. Benefiting everyone eventually, a levy should not fall foul of the anti-discrimination provisions of the Water Industry Act and, on an assumption of widespread take-up, should add only a modest amount to the average bill.

8.30 Recent estimates from the Environment Agency²¹⁸ suggest that a package of five retrofit water efficiency measures (principally WCs, tapware and showerheads) would pay for itself on the basis of an average bill in about two years. Supporting the principle, the Institute for Public Policy Research (ippr)²¹⁹ has called for "water affordability grants", similar to Warm Front, to help replace water inefficient appliances and, as an adjunct to such a scheme, and borrowing similarly from the energy sector, a water industry equivalent to the Energy Efficiency Commitment which set a legal obligation on energy suppliers to improve household energy efficiency. In the same report, the authors highlight how the water companies spent just 11 pence per customer per year to help reduce the amount of water they used, equivalent to just a mug of water each. This is despite being under a duty since 1996 to do so and an obligation on Ofwat to encourage them.

Additional ways of encouraging domestic water saving

8.31 At the same time, the government has also been slow to encourage conservation by other means that are common in other countries. Seemingly in fear of the house-builders, it

²¹⁵ *Encouraging domestic water saving*, Price H, PUA, June 1995 / *Environmental Health*, August 1995

²¹⁶ October 2008

²¹⁷ *The Calcutt review of housebuilding delivery*, DCLG, November 2007

²¹⁸ *Water efficiency in the south east of England: retrofitting existing homes*, Environment Agency, 2007

²¹⁹ *Every drop counts: achieving greater water efficiency*, ippr, 2006

has always been slow to up-date Building Regulations, *vide* standards for energy efficiency or sound insulation, and the current set on water efficiency are lax. Though they have been under review for some time, builders are encouraged to exceed them currently only by the voluntary "Sustainable Buildings Code"²²⁰. Last year, nevertheless, following comment by the Environmental Audit Committee²²¹ and a public consultation Defra and DCLG published a joint Policy Statement, announcing plans to introduce parallel "whole house performance standards" for water via revisions to Part G of the Building Regulations. They will take effect next April, nevertheless, rather than take full advantage of revisions still to come of the Water Fittings Regulations, revising the upper bounds for the efficiency of certain appliances, the new regulations will allow developers to trade efficiencies in some areas for inefficiencies elsewhere. Measures taken under the voluntary Code are already being criticised as impractical; baths too small for use and spray taps in kitchens are, it is said, only likely to be replaced by dissatisfied users²²², moreover, both the Code and the Regulations will apply only to new construction and the Department's defence that of all the houses standing in 2050, one-third will be built between now and then is misleading as to their impact. If only such a simple step had been taken many years ago.

8.32 Similarly, attempts at market transformation such as have been successful in the energy field are only in their infancy and disappointingly, Defra's Water Saving Group, set up only at the end of 2005, has been something of a closed shop, restricted to government and industry with no representation from the health or social welfare worlds²²³. Its output criticised for breaking little new ground, it was disbanded last month and if it might be suggested that water shortages in parts of the country have arisen through inaction and a lack of attention and joined-up public policy by government and its agencies, that would be understandable.

²²⁰ DCLG, February 2008

²²¹ Fifth report 2006

²²² See *Footprint* supplement to *Inside Housing*, September/October 2008

²²³ Its members are Defra, Ofwat, the Environment Agency, Waterwise, Water UK, DCLG and CCWater

Water charging: a submission to the independent Review of Household Water Charging and Metering for Water and Sewerage Services

9 The regulatory framework and economic issues

There are serious questions to be asked about the regulatory system, and the economic modelling used by the regulator which signally fails to capture and deal with many of these concerns. Furthermore we need to question whether it is acceptable that poorer households are put under increasing pressure by the costs of water compared with the cost of new reservoirs or the cost of a national water efficiency programme.

9.1 Responsibility for the economic regulation of the water and sewerage industry rests with the Water Services Regulation Authority (Ofwat), within a framework created by legislation and the Secretary of State. Environmental regulation is the responsibility of the Environment Agency (EA) working primarily within a framework set by the European Union. The inter-relationship between these two systems is explained below, but our focus is mainly on the system of economic regulation.

9.2 The general duties of Ofwat and the Secretary of State are set out in the Water Industry Act 1991, as amended (see below). It is commonplace to observe that these duties pull in different directions but it is worth emphasising certain aspects of them to highlight the tensions. First, section 2 (2A) (c) places a duty on Ofwat to ensure that the water companies are able to finance the proper carrying out of their functions. Secondly, in exercising their functions, Ofwat and the Secretary of State are required to have regard to the interests of certain groups of consumers; pensioners, people who are disabled or chronically sick, people on low incomes and people in rural areas. Thirdly, the duties should be exercised in such a way as to ensure neither undue preference nor undue discrimination in the fixing of water charges by the water companies. Finally, there is a more recent duty to contribute to the achievement of sustainable development. Notwithstanding, it has been commented that *"...Ofwat's devotion to the 'no-undue preference etc' clause remains virtually undiminished."*²²⁴

The Water Industry Act 1991 (as amended)

2 –

(2A) The Secretary of State or, as the case may be, the Authority shall exercise and perform the powers and duties mentioned in subsection (1) above in the manner which he or it considers is best calculated –

- (a) to further the consumer objective;
- (b) to secure that the functions of a water undertaker and of a sewerage undertaker are carried out as respects every area of England and Wales;
- (c) to secure that companies holding appointments under Chapter 1 of Part 2 of this Act as relevant undertakers are able (in particular, by securing reasonable returns on their capital) to finance the proper carrying on of those functions; and
- (d) to secure that the activities authorised by the licence of a licensed water supplier and any statutory functions imposed on it in consequence of the licence are properly carried out.

²²⁴ Herrington, 2007, note 131 above

(2B) The consumer objective mentioned in subsection (2A)(a) above is to protect the interests of consumers, wherever appropriate by promoting effective competition between persons engaged in, or in commercial activities connected with, the provision of water and sewerage services.

(2C) For the purposes of subsection (2A)(a) above, the Secretary of State or, as the case may be, the Authority shall have regard to the interests of –

- (a) individuals who are disabled or chronically sick;
- (b) individuals of pensionable age;
- (c) individuals with low incomes;
- (d) individuals residing in rural areas; and
- (e) *omitted*

but that is not to be taken as implying that regard may not be had to the interests of other descriptions of consumer.

(3) Subject to subsection (2A) above, the Secretary of State or, as the case may be, the Authority shall exercise and perform the powers and duties mentioned in subsection (1) above in a manner which he or it considers is best calculated –

- (a) to promote economy and efficiency on the part of companies holding an appointment under Chapter 1 of Part 2 of this Act in the carrying out of the functions of a relevant undertaker;
- (b) to secure that no undue preference is shown and that there is no undue discrimination in the fixing by such companies of water and drainage charges;
- (c) *and (d) omitted*
- (e) to contribute to the achievement of sustainable development.

(5A) In this section –

“consumers” includes both existing and future consumers; and

“the interests of consumers” means the interests of consumers in relation to

- (a) the supply of water by means of a water undertaker’s supply system to premises either by water undertakers or by licensed water suppliers acting in their capacity as such; and
- (b) the provision of sewerage services by sewerage undertakers.

9.3 One of Ofwat’s prime responsibilities is the setting of price controls for the water companies, which takes place on five yearly basis. The next price control is due to be set in 2009 and though commonly referred to as “PR09”, much of the decision-making will take place, necessarily, through 2008. As part of its duties of economic regulation, Ofwat also has the power to approve company tariff schemes. The government has given some guidance in relation to the price control and the structure of tariffs, but both are couched in very general terms and now ageing²²⁵ ; some fresh guidance on the current price review

²²⁵ *Principal guidance from the Secretary of State to the Director General of Water Services on the 2004 periodic review of water price limits*, Defra, 2004; *Water Industry Act 1999: Delivering the Government’s Objectives*, DETR, 2000

was given earlier this year²²⁶ and to an extent, the new water strategy provides a fresh backdrop. Relevant too are Ofwat's *Future strategy for customer charges for water and sewerage services*²²⁷ and *Water supply and demand policy*²²⁸.

9.4 The price controls are broadly aimed at ensuring that the companies have sufficient revenue to cover their expenditure, which includes operating and capital expenditure, a return on capital and tax. The price limits do not, in themselves, imply anything about charging mechanisms, but the limits are based on the assumption that the companies are efficient and there are certain incentive mechanisms within the price control that reward or penalise companies based on judgements regarding their efficiency. Because the price control system is meant to serve as a surrogate for market competition, the emphasis is broadly on relating prices to the costs of providing services.

9.5 This price control mechanism provides three main incentives for the water companies. First, they can try to outperform their price limits by being more efficient than Ofwat predicts, for example, through cutting costs. Secondly, there is an incentive to act strategically within the regulatory system; most obviously, to try to inflate the need for future expenditure, but also through other means such as delaying the start of capital expenditure projects. Thirdly, they could in principle outperform by increasing their revenue in a way that Ofwat has not predicted.

9.6 The first means of out-performance is wholly beneficial *if* it is assumed that there are sufficient protections within the regulatory system to prevent deterioration in the quality of supply and of customer service. Another equally important caveat is whether Ofwat's assumptions about the companies' costs and efficiency targets are robust enough. We note below that Ofwat has been heavily criticised as regards its performance in relation to ensuring that the companies achieve leakage reduction targets. Much also rests on Ofwat's assumptions about key financial indicators such as the appropriate level for the companies' cost of capital and their levels of borrowing (or "gearing").

9.7 The second means of out-performance is well known and Ofwat has expressed concern about company tactics in this regard. For example, it has drawn attention to the fact that in 2005/06 the companies invested £3.4 billion instead of the £4.3 billion assumed when the price limits were set for 2005-2010²²⁹ and in this report, commented that it was concerned about the sector's tendency to raise investment levels towards the end of each five yearly periodic review, and then invest less in the first years of the next review period. The regulator pointed out that such behaviour was not necessarily the most cost-efficient way of running a necessary and major investment programme; for instance the numerous contractors employed by the water companies might be likely to accept lower contract prices if investment programmes were longer-term and more predictable. The regularity with

²²⁶ *Statutory social and environmental guidance to the Water Services Regulation Authority*, Defra, August 2008

²²⁷ Ofwat, August 2008

²²⁸ Ofwat, November 2008

²²⁹ Ofwat, *Financial performance and expenditure of the water companies in England and Wales 2005-06*

which the companies seem to get away with these manoeuvres makes Ofwat look almost complicit in them, however, but it is consumers who suffer, adjustments to their bills taking years to be made.

9.8 The third means of out-performance is more of an “in principle” issue because the companies have limited scope for introducing new products and increases in consumption tend to be driven by increases in population. One exception would be if widespread metering were introduced but did not stem the rise in consumption resulting in more revenue for the company(s) that introduced it. Ofwat has recognised this as a problem and is therefore proposing to introduce a revenue corrected price control cap in PR09 which will correct for past over or under recovery, i.e over or under predictions already taken account of by Ofwat.²³⁰ How such a control can remain compatible with conservation tariffs is not, however, clear.

9.9 Overall, nevertheless, it is questionable whether the regulation of the water industry, despite its intensely economic focus, is “capturing” adequately key aspects of financial behaviours and decision making, and protecting consumers’ interests as fully as it should. For instance, the correlations between the formal price limits for each company and the companies’ financial out-turns (as determined by basic measurements such as pre and post tax profits, profit rates, and retained profits) are unclear but it is to be noted that no company appealed against its 2004 settlement and companies’ values rose significantly subsequently, along with operating profits. Concerns have been expressed about the robustness of Ofwat’s price regulation in past analyses, by the National Consumer Council for example. Such concerns include the level of outflows of dividends from the appointed businesses to their unregulated parent companies, and issues such as intra-company loans (to and from regulated businesses and their parent companies). These factors have an impact on consumer charges and are critical to considerations about fairness and equity.

9.10 It is welcome that Ofwat has taken formal action to control breaches of licence conditions from time to time. For instance, in June 2007, Ofwat announced that it was fining United Utilities £8.5 million for breaching rules governing trading arrangements with associate companies. However, there is a clear disparity of information and resources between the companies and Ofwat, and much depends on the ability of the regulatory authority to be willing to use its albeit limited resources to the maximum to protect consumers’ interests and ensure that the companies adhere to their licence obligations.

Company ownership

Of the 10 water and sewerage companies in England and Wales, five are independently owned and are quoted on the Stock Exchange. Four of them are owned by investment institutions, two of whom, the owners of Wessex and Thames, specialise in investing in infrastructure assets. Anglian and Southern are owned by private equity investors. Welsh Water is owned by a “not-for-profit

²³⁰ See RD 14/07, Ofwat

company" and is financed by bonds and retained financial surpluses. A number of the water only companies are also part of larger groups. Veolia Water UK owns three companies and two companies are owned by Australian infrastructure investment funds. The attraction of investment in these companies is that they offer long term and relatively predictable levels of returns for the investors according to stated investment strategies.

Approval of tariffs

9.11 Ofwat approves the water company tariffs. For domestic customers, the current position is that broadly there is a choice between an unmeasured tariff or a measured (metered) tariff. Typically an unmeasured tariff will comprise a fixed charge and a charge based on rateable value²³¹. A number of companies, of which the biggest are Severn Trent and Thames, divide their territory up into charging zones and there is some variation in the rateable value charge. For example, in Severn Trent, the lowest charge (poundage) is c.£1.53 in Zone 2 rising to £1.92 in Zone 6. These differences reflect, presumably, the difference in costs of supply in the various areas. The structure of a measured tariff will also incorporate a standing charge and a volume related charge and these will be common across the companies' areas.²³² As mentioned above (para 5.25), two companies have just begun experimenting with rising block tariffs and two are trialing seasonal tariffs. There are no declining block tariffs.

9.12 Ofwat has three relevant basic principles it applies in looking at tariffs:

- charges for water and sewerage services should be fair and equitable
- they should be as easy as possible for customers to pay
- they should provide incentives to customers and companies
- they should be simple and transparent²³³

Notable changes from Ofwat's previous statement of principles²³⁴ include the maintenance of a fair balance between measured and unmeasured charges, presumably untenable given the scale now of tariff re-balancing and that customers should not see significant changes in their bills from year-to-year. Also of note in its new principles is that Ofwat sees fairness and equity as separate concepts and that it eschews any attempt at a benchmark for affordability which in its mind means no more than "as easy as possible...to pay".

9.13 This approach, when combined with the legal duties to ensure that companies do not show undue preference or undue discrimination in their charging policies leads Ofwat to the

²³¹ Although Severn Trent does not have a fixed charge.

²³² Anglian and Mid-Kent both have metered tariffs where the standing charge is £0.00.

²³³ *Ofwat's future strategy for customer charges for water and sewerage services*, Ofwat, August 2008

²³⁴ In *Tariff structure and charges 2005-6*

conclusion that, where possible, there should be no cross-subsidy between different classes of customer²³⁵. This has had two relevant implications. As regards social tariffs, Ofwat is prepared to allow them for metered customers provided companies can show that they are properly targeted (which may only be achievable by restricting eligibility to customers in receipt of benefit) and will have only a small impact on other customers' bills. For unmetered customers, the main protection is the rateable value system which, crudely, shows some correlation between low rateable value and low income. Ofwat is in general unwilling to accept new proposals for low user tariffs because there is only limited support for them. It has not, however, asked Anglian and Mid-Kent to withdraw their existing tariffs and has recently approved a new social tariff from Wessex, called *Assist*, discussed above (para 5.24). Overridingly, however, Ofwat has always considered that metering is the fairest method of charging for water because it relates charges to the amount of water customers use and the amount of sewage they discharge and, hence, to long-term costs.²³⁶ Recently, it has said it "*will support more rapid progress towards high levels of meter penetration*" and, arguably straying into political territory, that it does "*not intend to seek an unmetered alternative to the rateable value system.*"²³⁷

Demand side issues

9.14 One of Ofwat's major duties is to ensure that water companies can carry out their functions, which, in this context, means that they are properly able to meet future demands for water. Over the next four to five years demand is in general expected to be stable, although half of the water companies, the majority in the south east of England, predict that demand will increase in their areas.²³⁸ At the same time there is pressure to reduce water abstraction, because of environmental concerns, and, in particular, little possibility of new abstraction in the south east.

9.15 Water companies have a general duty to develop and maintain an efficient and economical system of water supply and, through their Water Resource Plans, to make the necessary arrangements to provide water supplies to ensure that they can meet their legal obligations. Ofwat has a duty to make sure that companies continue to supply water to customers and it monitors the companies' performance and has powers to take enforcement action against companies that do not meet their leakage targets. Ofwat checks that leakage is at the level where costs are minimised – this is known as the economic level of leakage: it is the point from which reducing leakage costs (including environmental costs) is more than developing new water resources.

9.16 Leakage rates are a sensitive issue with consumers but according to the most recently available figures, all of the companies met their leakage targets for 2007-08. Their performance in the past has been somewhat uneven, however, and, for example, Severn

²³⁵ Ibid p 11

²³⁶ *Water Metering: Position Paper*, Ofwat May 2006

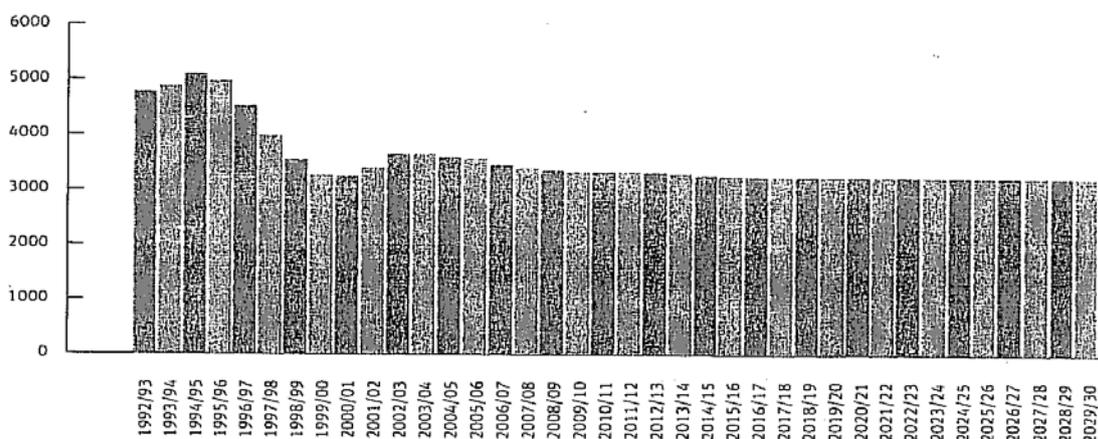
²³⁷ Note 233 above

²³⁸ *Ofwat – meeting the demand for water*, NAO, 2007 at p 7

Trent failed to meet its target in 2006-07, resulting in Ofwat seeking a legally binding undertaking from the company committing it to achieving its leakage reduction targets for the next three years and improving its ability to deliver its planned level of water service to consumers. Should Severn Trent Water not live up to this commitment, Ofwat has said that enforcement action will follow, including fines if necessary. Severn Trent Water also agreed to reduce charges to its customers in 2008/09 by around £12 million.²³⁹ In the previous year, Ofwat took similar action against Thames Water which, costing shareholders around £150 million, bound it to replacing an extra 368km of ageing pipes to meet demanding leakage targets up to 2010²⁴⁰

9.17 However, there are underlying issues regarding leakage, for instance, what is meant by the economic level of leakage and the extent to which it reflects the costs to consumers. Furthermore, and not least since despite rising prices (and even government expectations²⁴¹) little further reduction in leakage rates is expected in future years, question marks have been raised about whether Ofwat's leakage reduction targets are sufficiently rigorous and, notwithstanding some high profile cases, whether the it has been effective in dealing with companies that have failed to meet their targets.²⁴²

Fig 5: Actual and forecast leakage in England and Wales (MI/d) 1992/3 – 2029/30



Source: Environment Agency

9.18 In part response, Ofwat has also introduced water efficiency targets which aim at reducing the amount of water delivered by 0.25%, 0.5 % or 1% depending on a company's water stress classification. These targets are not mandatory, but similar ones will become so after PR 09.²⁴³ They are contained in *water Efficiency Targets 2010-11 to 2014-15*²⁴⁴ and

²³⁹ Ofwat press release, 9 August 2007

²⁴⁰ See PN 20/07, Ofwat, 29 June 2007

²⁴¹ See eg para 2.43 of Defra's *Statutory Social and Environmental Guidance to Ofwat*, August 2008

²⁴² *OFWAT: Meeting the Demand for Water*, Public Accounts Committee 2007

²⁴³ See RD 15/07, Ofwat

²⁴⁴ Ofwat, November 2008

are in two parts: base service water efficiency (BSWE) and the sustainable level of water efficiency (SELWE). BSWE is the minimum level of activity expected of all the companies and comprises three key elements:

- an annual target to save an estimated one litre of water per property per day through water efficiency activity
- a requirement to provide information to consumers on how to use water more wisely and
- a requirement that each company actively helps to improve the evidence base for water efficiency.

Under the SELWE heading, companies will be required to “consider” additional water efficiency measures if they form part of a sustainable economic approach to balancing supply and demand but savings under this heading will include estimated savings that arise from metering.

9.19 Ofwat makes much of the fact that the targets represent a 40% increase in savings though 40% of very little remains, in fact, very little; saving a mere 1 litre per property per day looks hardly taxing and Ofwat’s heart does not seem really in this. No doubt for the same underlying reason, it has been criticised by the Public Accounts Committee for not having a good understanding of consumption patterns and which measures are most effective at improving the efficient use of water.

9.20 Only limited faith can, in any event, be placed in water company figures. The National Audit Office noted²⁴⁵ *“There are inherent weaknesses in information on demand for water and leakage”*. Figures given for leakage (as for consumption) are simply estimates but in only a little over a year, Ofwat has announced enforcement action against three of the Water and Sewerage companies and a Water-only company²⁴⁶ for the misreporting of data to the detriment of consumers. Falsely reporting a reduced leakage rate, for example, in pursuit of Ofwat’s targets would lead to inflated estimates for consumption.

²⁴⁵ Quoted in NCC 2002, note 159 above

²⁴⁶ Against Severn Trent Water in June 2006, Thames Water in September 2007, Southern Water in November 2007 and Tendring Hundred in August 2008, see Ofwat Press Notices PN 16/06, PN 33/07, PN 42/07 and PN 27/08 respectively

10 Consumer views

How consumers feel about water efficiency and charging systems is a critical element in debates about these issues, especially when considering the likely success and effectiveness of future policies. This section begins by outlining research findings on consumers' attitudes towards the water companies - this aspect clearly has a major influence on consumers' views about water saving and the costs of water and sewerage services. It goes on to discuss the results of research into consumers' views about water efficiency and some findings on attitudes towards sustainability in general. This is followed by an exploration of consumers' views about who should be responsible for helping people in difficulties with paying for water, and about different charging options. The section concludes with comments on the findings.

The companies

10.1 There is a lot of anger about the perceived mismanagement of the water supply by water companies, according to the results of deliberative research with consumers carried out for CCWater (the Consumer Council for Water)²⁴⁷. In common with other issues surrounding behaviour change and the environment, people are willing to make changes as long as they are part of a larger effort, which in this case particularly includes an effort by the water companies, nevertheless, consumers clearly feel that the water industry is not doing enough at present.

10.2 Participants felt strongly that leakage and supply mismanagement are the main causes of water shortage; this view changed little throughout the course of the research process and was reinforced when figures about industry leakage were disclosed. These dwarfed the amounts of water potentially used in a domestic setting and cast the industry in a more negative light. Under current circumstances most customers stated they would not be willing to pay increased bills to achieve greater water efficiency. The same attitude was strongly expressed during discussion of possible rota cuts or pressure reductions. Consumers felt that such restrictions in a context of leakage and large water company profits would be extremely unfair.

10.3 According to the research report, privatisation of the UK water industry is still causing people to question how such an apparently abundant natural resource can be privatised and sold at a profit. Linked to this point, continual media reporting also caused people to question how something so important could have been allowed to slip into such a state of disrepair by those who were trusted to look after it, namely the government and the water industry.

10.4 CCWater has also commissioned other deliberative research to explore consumers' perceptions about issues associated with paying for water and sewerage services and the

²⁴⁷ *Using Water Wisely*, Opinion Leader Research Final Report for the Consumer Council for Water, 2006

principles of charging²⁴⁸. The findings reflected those of the previous research outlined above in terms of general consumer mistrust of the water companies. Many of the participants, particularly those who felt that their bills were too high, were most concerned in terms of fairness about the triangular relationship between the bills they were paying, the services provided, and the profits made by the water companies. There was a widespread feeling that the companies should not continue to make large profits when leaks remained un-repaired.

10.5 This research found that, in the absence of competition, many participants needed to know more about how much it costs to provide water services and what profit margin the water companies obtain before deciding whether they were getting value for money. In this context a good number expressed the view that the water companies should be re-nationalised. The most enduring concern was that, regardless of regional variation, in each location the consumer should get a fair deal in terms of what they pay to the water company, how those monies are spent and invested, and the service they receive.

10.6 Participants were also united in the view that information about water and using it wisely cannot come from the water industry itself. The reasons were that the public are inherently sceptical of big business and its motivations, and for most, it does not make intuitive sense that the water industry would want to reduce the amount of water consumers are using, even when this is in the context of reducing wastage. Furthermore, awareness of the performance problems that many water companies are currently, or have recently, experienced is widespread. In this context consumers are very unwilling to consider altering their behaviour in any way which might seemingly help the water companies address the problems that they are very much seen as being responsible for causing.

Water efficiency

10.7 The research for CCWater on *Using Water Wisely* showed that water holds a central place in people's lives.²⁴⁹ The most common theme was the use of water in hygiene activities. Many participants referred to bathing, washing and cleaning activities – areas where there is likely to physical contact with water. Other associations included "life" (whereby water is equated with survival and words like "essential"), "leisure activities" such as fishing and swimming and also "bodies of water" – the sea, lakes and reservoirs. The researchers reported that at a very early stage in the research process, there was a considerable amount of awareness of issues surrounding conservation and the recognition that there may be a scarcity problem. A number of participants also talked about wasting water and leakage levels.

²⁴⁸ *Deliberative research into consumer views on fair charging for the Consumer Council for Water*, Corr Willbourn Research, 2007

²⁴⁹ *Using Water Wisely*, Opinion Leader Research Final Report for the Consumer Council for Water, 2006

10.8 The majority of participants found it difficult to conceptualise the volumes used in the home. The research report contended that this was perhaps because traditional rateable value charging methods do not provide users with any kind of reference point as to volumes. Although there appeared to be greater recognition of the amount of water used by those with meters, this generally tended to be understood in monetary rather than volume terms. According to the research carried out for CCWater on charging for water, however, no metered respondents spontaneously recalled the price they were paying per cubic metre of water.²⁵⁰ Neither did any have any real sense of how much water a cubic metre was in everyday terms (such as how many cubic metres are required to fill a bath etc), nor, without looking at their bills, how many they used. Those who had chosen to change to a meter did so because they believed they would save money, and it was the saving to which they paid attention, not the calculation of how it was achieved.

10.9 The research on *Using Water Wisely* found that 23% of the participants had water meters and, although the majority of those with meters were positive about them, several said they did not know exactly where they were located in their homes. Even including those who did know where their meter was, many more said they did not really know how to read them. The important difference for these consumers was in measuring changes in their water bill rather than knowledge of volumes of water consumed. These participants therefore argued that they did not need to know where the meter was situated or how to read it in order to measure whether their expenditure on water had decreased.

10.10 Beyond those who had meters, this research found that few participants were able to discuss the advantages and disadvantages of a water meter in an informed way. Some argued hypothetically that increased uncertainty could be a major disadvantage, for example if other relatives came to live in their homes. Others suggested that the increased ability to monitor usage would allow them to increase water efficiency. However, most participants were unable to discuss this in detail when they were asked to do so. This was in part because water charging in general only really became an issue for people when they are confronted by the costs and perceived inequalities and asked to discuss them. According to the research report, during the course of the discussion dismay was evident about perceived discrepancies in charging when on rateable value, when compared to friends and neighbours.

10.11 All these research results need to be treated with caution, however, because of concerns about the way the research was carried out. Some of the information given to participants was not sufficiently objective and could well have influenced their answers. In particular, amongst the fact sheets given to participants as essential reading, Factsheet 3 contained the following value-laden and contentious statement: *"We use water in different*

²⁵⁰ *Deliberative research into consumer views on fair charging for the Consumer Council for Water*, Corr Willbourn Research, 2007

ways. Some people use water carefully because they have a water meter. Others use as much as they want because they have paid for a service."

10.12 The research also found that current use of water saving devices was quite high, and higher than participants initially believed. When asked to name any water saving devices that they were using in home, the majority initially claimed not to be using any. There was some awareness of "hippos", water butts and dual flush toilets but awareness was low overall, although those who demonstrated a "green" attitude to their lives were more likely to have adopted water saving measures than others.

10.13 Many participants stated that they would be willing to pay a certain amount extra to increase their water efficiency, for example some said that they would be willing to pay a little more for more water efficient white goods. However, consumers are only willing to act and to make sacrifices if they perceive that their actions are being matched by the other major players. Participants said that manufacturers of white goods would need to demonstrate that they have offset some of the extra cost through lowering profit margins.

10.14 The research report stated that participants have tried hard to come to terms with the changes in the water industry over recent years, however, many did not feel able to engage with the changing circumstances. In many cases this took the form of a refusal to accept that the situation was serious, particularly for those who were not directly affected by the situation, for example those living in water plentiful areas. In contrast, those living in water stretched areas often reacted with anger and blame. According to the report, however, while initial reactions and topics of discussion were often negative, in all but two areas the deliberative experience allowed participants to adopt a broader and more balanced view of the issue. The process greatly increased the tendency to think in terms of 'all of us' as responsible for doing something to alleviate shortages. Nevertheless, participants' negative views on industry leakage and the motivations of the water industry and government generally remained.

10.15 In terms of behaviour and attitudes to water, the researchers concluded that consumers can be segmented according to psychographic and demographic variables, which they contended determine people's willingness and ability to engage with issues around water and to modify their actions to conserve water. The research categorised people according to three broad life stages with regard to attitudes to water:

- younger participants, single or young couples, have received knowledge from school or university but they often lack the resources to turn this into action
- middle life stage participants, usually with families, are focussed on cost and routine, and not always motivated to engage or take action
- older participants, often widowed and retired, are far more knowledgeable, engaged and actively involved in water conservation

The conclusion was that communications must be targeted and that demographic factors, particularly age and family status, affect willingness and ability to act in using water more wisely. Some sociological factors have been examined in more detail since²⁵¹ with one conclusion being that the current focus on reducing *per capita* consumption does not recognise the diverse ways water is used in everyday life, i.e. not as the consumption of a uniform substance but as a consequence of things people do; another, from an industry contributor, is that while companies could do more to encourage water efficiency, economics do not always tell the whole story.

10.16 A strong theme that emerged from the research included the need for better and more holistic information about the situation, including realistic and useful practices for reducing water wastage at least cost to the user. The findings showed that there is a strong need for the public to be provided with more information about water conservation without being preached to or blamed yet there is also a perceived void in terms of a trusted source for communication.

Sustainable consumption

10.17 Wider research on people's attitudes towards sustainability issues also serve to underline some of the above findings. For instance, research cited in a report for the Sustainable Consumption Roundtable showed that many people are willing to see new policies introduced that will help them change their behaviour in the face of climate change and global poverty but they need the government to set an example and make it easier for them to do the right thing.²⁵² According to the report, fewer than one in three people yet had heard of the term "sustainable development" and qualitative studies suggest that very few, even of these, can explain what it means.

10.18 The research report pointed out that the complexity of information required to make a judgement on product sustainability can leave even the most dedicated green consumer confused and disempowered. Reflecting similar findings to the CCWater research discussed above, this research nevertheless showed that people are willing to change, but they need to see others acting around them to feel their efforts are worthwhile. Consumers place a premium on interventions being fair. This is principally about social justice and equity; they want to ensure that new initiatives are not open to manipulation by rich consumers and, for example, concerns are raised that wealthy consumers could buy up lots of carbon credits, or would benefit more from one system or another.

10.19 Previous research for the National Consumer Council pointed out that household finances are far more of a priority than sustainable consumption – particularly for consumers on a lower income and those with children.²⁵³ This was not about being unwilling to spend

²⁵¹ *Behavioural change and water efficiency*, Shove E et al, ESRC, March 2008

²⁵² *I will if you will: Towards sustainable consumption*, Sustainable Consumption Roundtable, 2006

²⁵³ *Green choice: what choice? summary of NCC research into consumer attitudes to sustainable consumption*, National Consumer Council, 2003

more on goods and services with lower environmental impacts, rather, it was about how consumers have to plan and prioritise their household budget to get by. For lower-income consumers, getting by week-to-week is the main concern; as well as tight budgets, usually managed on a weekly basis, many of these consumers are struggling with poor quality housing, isolation through location or unemployment, and job hunting. Discussions of environmental issues usually quickly come back to immediate social or economic concerns.

10.20 When respondents in the Defra/ONS Quality of Life survey were asked about their domestic water usage, 29% said they had reduced their water usage “on a regular basis”. However, 71% said they had not, of whom 62% said that this was because they could not use any less water at home.

Charging for water

10.21 There was little understanding of how water and sewerage bills are calculated and what they cover, according to the research for CCWater on charging for water and sewerage services²⁵⁴ nevertheless, the idea of fairness, or rather unfairness, emerged quickly during this research, reflecting the principles most of us think should shape any charging system. All the participants agreed that the current system was unfair in several respects, however, the research also showed that the concept of fairness was not simply related to the two charging systems (unmeasured and measured) as many responses to the notion of fair charging concerned issues other than tariffs, including:

- the monopolistic position of suppliers.
- the perceived excessive profits of water companies.
- poor maintenance and replacement history of some suppliers.
- perceived lack of “tough” regulation; and
- opacity of how charges (irrespective of tariff) were arrived at in the first place.

10.22 Initially, the vast majority of participants considered that a simple “pay for what you use” tariff was the fairest system, and this was thought to encourage more environmentally aware usage too. However, many were worried that, due to the lack of competition, it could become unfair if metered charges were to rise and cause people to fear using their water in case they should incur unaffordable bills.

10.23 The “rising block” tariff was the only new metered tariff to evoke sustained support, as many saw this as a way potentially to reduce their water bills by judicious use of their first “free”/low cost block. However, no-one felt that the first block would really be free as they expected some kind of standing charge to be levied – instead it was the perception of “freeness” that was motivating. Many also believed that this option would be a more

²⁵⁴ *Deliberative research into consumer views on fair charging for the Consumer Council for Water*, Corr Willbourn Research, 2007

effective tool in encouraging sensible usage and, according to the research report, it “... *would properly punish the profligate through higher bills*”. There was no support for adopting a seasonal tariff nor for increasing the standing charge and reducing the volumetric metered rate.

10.24 None of the proposed alternative unmetered tariffs gathered sustained support. Those who felt that an unmetered tariff was excessively costly tended to propose a metered tariff as a more equitable alternative. Basing charges on Council Tax was not seen as offering any significant improvement over the current rateable value basis. Basing charges on the number of bedrooms or on the number of occupants was felt to be open to confusion and fraud, and some were also worried that this would lead to excessive and intrusive information gathering.

Help with water bills

10.25 The same research for CCWater also explored consumers’ attitudes towards various options to provide assistance to people experiencing difficulties affording their water bills,²⁵⁵ however, these results need to be treated with caution for a number of critical reasons set out at the end of this section. The research showed that there was strong opposition to any extension of social tariffs to low-income or benefit-claiming groups apart from a couple of specific exceptions. Participants felt that extra help with water bills should be given to people with a medical condition requiring large amounts of water, and to pensioners who are in receipt of only the basic state pension. They rejected the use of social tariffs for any other groups.

10.26 Across the sample the majority believed that sufficient help for paying bills is already made available through the benefits system but that if subsidies were to be provided they should not be paid in cash but direct to water companies by the government. For the most part cross subsidies were accepted as a consequence of a system that could not be completely fair but the effective subsidy of debtors by prompt payers was strongly resented.

Limitations of the research

10.27 The research report showed that there was little understanding amongst the participants of the scope and value of benefits: “...*the majority believed sufficient help for paying bills is already...available through the benefits system.*” It does not appear that they were given information to improve their level of understanding, for instance, about the levels of benefits, the absence of specific help with water charges, or the numbers of people living in poverty.

10.28 This view, expressed by the majority of participants, that sufficient help is available

²⁵⁵ *Deliberative research into consumer views on fair charging for the Consumer Council for Water*, Corr Willbourn Research, 2007

through the benefits system also helped to shape attitudes towards social tariffs, particularly that such tariffs are only acceptable for those with medical needs and pensioners on a state pension. Information does not appear to have been provided about the possible numbers of people who have above-average essential need for water and in general, such views appear to reflect prejudices about the “deserving” and “undeserving” poor, for instance participants felt that if there is to be additional help for poorer consumers, it should not only come out of taxation but be paid directly to the companies by the government. Similar opinions expressed in an Ofwat survey²⁵⁶ were reported in our last paper where they were traced to a distrust of the benefits system, rather than to poorer consumers. It is also questionable whether the issue of “*the effective subsidy of debtors by prompt payers*” emerged spontaneously, however, the research did identify the essential driver as a desire for a reasonable deal for everyone, which appears to contradict the above findings. Furthermore, many were worried that metering could have unfair effects if the rates were to rise thereby causing people to fear using water.

10.29 The need for caution when examining public attitudes towards this type of issue is also underlined by a recent review of the literature on “economic inequality”.²⁵⁷ The research findings identified contradictions in public attitudes towards inequality, poverty and redistribution. The authors suggested that this is not surprising because of lack of knowledge as to how people understand and interpret these concepts in answering relevant questions. They concluded that examining the more underlying values that people draw on offers a potential way forward, and is more powerful in explaining attitudes than demographic and socio-economic variables such as age and income.

10.30 Other research has shown that people’s attitudes towards disability can be similarly uninformed. This is important in terms of public views about who should be given help with water bills. For example, the latest *British Social Attitudes Survey* (January 2007) showed that disability is still perceived mainly in the narrow and outdated sense of visible physical disability such as wheelchair use. Disability anti-discrimination legislation uses a much broader definition that incorporates conditions such as long-term debilitating illness. It also revealed high levels of prejudice against some groups defined as disabled under the Act – in particular, people with a mental health problem.

Conclusions

10.31 The available recent research evidence demonstrates the strength of consumers’ feelings about the water industry and about privatisation and wastage. While many people are willing to take action and become more water-efficient, they want evidence that others are doing what they can and, in particular, that the companies are tackling leakage levels. The water industry is facing a hefty challenge to overcome the mistrust felt by many consumers. This is also an important factor in deciding who should give consumers

²⁵⁶ *Protection for Vulnerable Customers*, DVL Smith for Ofwat, 2000

²⁵⁷ *Public attitudes to economic inequality*, Michael Orton and Karen Rowlingson, Joseph Rowntree Foundation, 2007

information and assistance with water efficiency, as it is clear that the companies are not generally viewed as a trusted independent source of help.

10.32 It is nevertheless also clear that water holds a central place in people's lives but the research so far has also shown that public understanding about the advantages and disadvantages of water metering is relatively low. Notwithstanding, concerns were expressed about the possible unfair effects if metered charges were to increase and overall, it would be useful for further deliberative research to be carried out which ensures that the participants are given more detailed information on which to base their views about charging systems and tariff structures. Similarly, the research on consumers' attitudes about who should be helped with water charges is only partially of help. It demonstrated the existence of a number of prejudices about who is "deserving" but also a lack of informed understanding of benefit levels and what they do and do not cover. As a result, these findings need to be viewed with great caution and any subsequent research should take account of the deeper values that underlie these beliefs.

11 Some conclusions and issues for the future

An editorial in the CIEH's journal 15 years ago²⁵⁸ predicted that we would both pay more for our water and receive less of it. CCWater too is beginning to question what benefit consumers receive for rising prices.²⁵⁹ It has taken longer than we expected to reach this point but it is no less absurd a position to find ourselves in.

While the government has been slow to do so, we have long argued for a more holistic and sustainable solution. Ofwat now has a legal duty to promote sustainability and that means taking greater heed of the social consequences of water policy. If our goal of enabling every household to receive all the wholesome water it needs is to be fulfilled, we need a more equitable system of charging than one based solely on market principles. That should be based on a proper recognition of the circumstances of poorer households, a realistic approach to resource development and a focus on conservation which, harnessing consumers' goodwill, aims to reduce the need for consumption rather than crudely driving down demand.

11.1 Everyone agrees: water is special, adequate supplies must be maintained and those must be affordable. That is where agreement also ends, however, with no consensus about what constitutes an adequate supply, what is meant by "affordable", or how that might be achieved though these are fundamental questions. There is, however, growing evidence that, however defined, those twin goals are not being met, partly due to the way our water industry is structured and managed and partly due to extrinsic factors which are nonetheless part of its social and economic context. That failure matters, of course, because it is a cause of social division, it affects individual well-being and threatens personal and ultimately public health. It is also quite unnecessary though that is not to say that there is a single answer, or even simple answers to it; resolving the tensions between the social and environmental policy goals in particular is, admittedly, difficult.

11.2 Though it would now be hard to turn the clock back, the root of the problem lies in the market approach taken to the industry first by the Tories in the 1980's – arguably a privatisation too far - but perfidiously since by the present Labour administration too. That has meant, among other things, that the industry has had to become self-financing, turning sufficient profits to attract investment, and it is what underlies the big regional differences in prices. It is also why we have concepts like "economic leakage rates" and why price mechanisms predominate in balancing supply and demand and, increasingly, in suppressing the latter. The trouble is, however, that markets are not fair and in our view neither the government, the regulator or consumer representatives (only recently independent of Ofwat, and in some eyes²⁶⁰ still influenced by it, anyway) have done enough to correct that.

²⁵⁸ *Environmental Health* vol 101, number 6, June 1993

²⁵⁹ See, for example, *Water bills rise but are customers benefiting?*, CCWater Press Release 26 February 2008

²⁶⁰ See *Poor Choices*, energywatch, September 2008, para 4.2

11.3 Our previous work uncovered a sizeable population of “water poor” households, obliged to spend an excessive proportion of their incomes on water charges. Among them are many whose use of water for essential needs is relatively high but their problem is predominantly one of low income and the evidence shows that despite improvements in benefits levels, there continues to be a large number of people in poverty. Trends in incomes and living costs suggest this group is likely to grow. Exacerbating their situation, the evidence also is that average water bills will continue to rise faster than inflation, in part because of pressures for greater environmental protection and not least in regions where incomes are lowest. Having shrunk a little in the past, water poverty seems bound to go on increasing as a result but for these households, it is pointless to consider water charges in isolation from the other challenges to their domestic budgets.

11.4 Efforts by the government to relieve general poverty should – must - of course, continue, it is something we all pay taxes for, but it is becoming increasingly important for the government and Ofwat to justify investments in the water sector which result in real price rises. In particular, Ofwat must continue to improve its approach to price-setting to ensure that prices rise no more than is absolutely necessary (and in particular to ensure that “out-performance” is not simply the result of “gold-plating”) and that companies carry out the work that they have been funded for. At the same time, the composition of water bills should be reviewed to ensure that domestic consumers are not paying for elements which in fairness should be charged elsewhere. Whether the value to “virtual competition” of maintaining so many small water-only suppliers really outweighs the diseconomies to consumers of their small scale is also worth pondering.

11.5 The available means of helping poor households with their water bills are, nonetheless, totally inadequate and rely on the flawed Vulnerable Groups Regulations (for metered consumers) and discretionary charitable assistance. The government’s “Affordability Pilot” has shown, as we knew it would, that benefits checks are no answer, not least since benefits do not cover water charges. Recognising that disadvantage is spreading beyond the tightly-defined vulnerable groups, there is an urgent need for the government to investigate ways of ensuring that *everyone*, not just Mr & Mrs Average, whether on a measured or an unmeasured tariff, can afford their water bills. That may mean a new approach to social tariffs with a fresh view both of “undue discrimination” (particularly in the light of Ofwat’s other duties) and of cross-subsidies from others but it continues to be surprising and a matter of concern that no explicit state help is available with the costs of such an essential service, contrary to the position with energy where some – albeit limited – help has long been available (and increased readily enough in response to recent price rises), for example through winter fuel payments and help with energy efficiency improvements. A solution also needs to be found for the inequity of vastly different regional prices, those in the South West providing the outstanding example. Variations in the structures of bills and how they reflect the balance of fixed to variable costs would bear examination at the same time.

11.6 The assumption is that present policies encouraging the growth of measured charging will, despite its huge inherent costs, continue; we recognise that the present Review is aimed at facilitating that, not questioning it. For the time-being in much of the country still focussed on optional metering, we see no reason why the generality of consumers should subsidise that and in particular we hope this Review will end government dissembling about consumers' choice of charging methods and about the costs of meters, including the effects of tariff rebalancing. Metering does not save money. In areas of water stress, with government encouragement, metering will continue to spread quickly by compulsion. Those areas are also likely to expand, however, and the problem of affordability for poorer people is likely to become severe if they are moved onto a metered tariff, expressed no longer just in high bills but then also in a constrained supply. What the government now champions as a fair "pay for what you get" system is equally a "get only what you can afford" one; fine if you are relatively well-off or the price is low, not so fine if you are struggling financially or the price is high.

11.7 There is an attempt to justify this policy in an assumption that metering leads *a priori* to a downturn in consumption in the order of 10-15% though there is no logic to that. It is based on some old (and equivocal) studies and urgently needs updating with robust research which should be made public and used as a basis for consultation before charging ahead with compulsory metering. While in general, much of the "evidence" on which major decisions are now being based derives from little more than economists' computer games, it is of profound concern that insofar as metering *may* encourage conservation, little is known about which consumers contribute most, or what uses they cut back on, or at what alternative costs.

11.8 This research must include research on consumption patterns in relation to both compulsory and optional metering and to particular tariff structures to see what their impact would be on particular groups or at particular relative prices. Notwithstanding, if the rising block tariffs in which so much faith is currently being placed are introduced, our understanding is that charges would need to rise substantially with each block of consumption to give a strong price message and incentive to conserve. This will penalise those with relatively high essential needs for water and will be discriminatory and the case for allowing these households to retain access to an unmeasured tariff needs to be investigated.

11.9 Further, if, at least in the case of these households, those for whom (for technical reasons) metering is inappropriate and others not in stress areas, the government's claim that its aim all along has not been universal metering is not to appear pure sophistry, it must now, as a matter of urgency, develop a new universal basis for unmeasured charges to replace rateable values and permit consumers who want to, to access that on demand.

11.10 It is also evident that, regardless of what means of charging for water is adopted, there is much work to be done in relation to water conservation, particularly on the practical

means of encouraging the installation and use of water efficient devices and equipment. There would seem to be substantial lessons to be drawn here from policy in the energy sector and from experiences in other countries. There is a need to work with consumers on this as, with some justification, the survey evidence suggests they lack confidence and trust in the water companies. The best way, we still suggest, is through the establishment of an independent Water Saving Trust, perhaps accompanied by the development of "water service companies". Re-establishing trust in the water companies, dispelling the image created by recent mis-reporting scandals, is a job jointly for Water UK and Ofwat which must improve the quality and reliability of company data. A much better understanding of how the industry operates and why must also be engendered among consumers if their views on its future are, as they ought, to be afforded any weight. That is particularly true of its economics which do not seem always to operate in consumers' favour. This is a job for CCWater.

11.11 Whatever happens in terms of water charging, however, must conform with sustainable development principles, that is, policies and practices should be based on social and equity considerations as much as on environmental and economic objectives. Whereas the former have often been overshadowed, they argue strongly for policies designed to reduce *need* in place of crudely driving down *demand*. Sustainability also obviously implies long-term aims and measures yet currently, there seems a lack of joined-up thinking at government level. Most obviously, much of the increasing pressure on demand for water in the south east is a result of government plans for new housing which seem to have been drawn up with inadequate consideration of the implications for water resources. Targeting individual consumption is simply Quixotic and with or without meters, it should be plain that a finite supply cannot be divided among an inexorably growing population without unacceptable consequences.

11.12 Solving the affordability issue, recognising the importance to society of everyone's ability to pay for this unique product, is key to the development of water charging. To the extent that the government sees charging policy as at the heart of conservation policy, it will need to deal with that much more imaginatively than hitherto.

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